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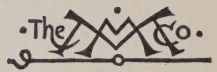

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IDEALISM IN EDUCATION

OR

FIRST PRINCIPLES IN THE MAKING OF MEN AND WOMEN

BY

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TO

B. W. H.

PREFACE

IDEALISM finds ideas and purposes to be the realities of existence; and personality, which is the union of ideas and purposes, to be the ultimate reality. These views are in contrast with all forms of materialism which would reduce ideas and purposes to some form of physical existence.

Educating is the purposeful providing of an environment; at bottom it is personality in and behind the environment that counts most; so educating is really a relation between personalities of different degrees of maturity.

If these views are correct, it is evident that idealism is the true philosophy in educating. The relation between teachers and pupils, being personal and reciprocal, is something more than materialism can either allow or explain, than the commercialism of trade can understand, than any form of egoism can attain. It is instructive for us in an age of material progress and salary questions to remember that Thoreau wrote down in "Walden": "I have thoroughly tried schoolkeeping, and found that my expenses were in proportion, or rather out of proportion, to my income, for I was obliged to dress and train, not to say think and believe, accordingly, and I lost my time into the bargain. As I did not teach for the good of my

fellow-men, but simply for a livelihood, this was a failure."

In the pages of this book, idealism in educating is pictured as combining both science and philosophy in the practical aim of man-making. In the first chapters, on a scientific basis, we have ethical idealism, in which men and women as unfolding personalities are viewed as the worthiest objects of human endeavor. In the last chapter we have philosophical idealism, in which human personalities are viewed as the indistinct but developing images of the Divine Personality.

Two persons who have lately left us rich educational legacies in their writings have stated, the one, on a scientific basis, our practical aim, the other, on a philosophical basis, our idealistic interpretation.

At the conclusion of his "System of Synthetic Philosophy," Herbert Spencer, the agnostic altruist, wrote: "Hereafter, the highest ambition of the beneficent will be to have a share — even though an utterly inappreciable and unknown share — in the 'Making of Man.' Experience occasionally shows that there may arise extreme interest in pursuing entirely unselfish ends; and as time goes on, there will be more and more of those whose unselfish end will be the further evolution of Humanity. While contemplating from the heights of thought that far-off life of the race never to be enjoyed by them, but only by a remote posterity, they will feel a calm pleasure in the consciousness of having aided the advance towards it."

America has recently lost an idealist in education.

Dr. W. T. Harris died November 5, 1909. Toward the conclusion of his "Psychologic Foundations of Education" (p. 383), he wrote: "According to the current evolutionary view, all nature is a struggle for survival of forms. Of the organic forms, the plant serves the animal and yields to him. The animal in turn yields to man. Man, in fact, conquers all nature. Here the law of the survival of the fittest comes to mean the survival of individuals that have most intelligence. All nature, it would seem, is a process for originating individuality and developing it into rational being. Looked at theologically, this is satisfactory. Nature is the creation of souls. It implies, of course, the supremacy of mind, since all its lower processes exist for the production of spiritual beings — they depend on mind, so to speak, and demonstrate the substantiality of mind. Mind is the final cause and purpose of nature. This again implies that mind creates nature to reflect it. God creates nature, and through nature creates spiritual beings who participate in his blessedness. Hence nature presupposes a God of grace and good will toward his creatures."

In the spirit of these quotations from two great but very different educators, this book is written. It would combine the practical aim of Spencer to assist in the evolution of humanity with the idealistic philosophy of Harris. The aim of Spencer is new, it being characteristic only of the biological nineteenth century, and after, to assign man's "Golden Age" to the future; the philosophy of Harris is in line with the traditions of Hegel and Plato.

The forces that make men and women I find to be heredity, environment, and will. Education is not a fourth elemental force, but it does its work in coöperation with these three. Education, through public opinion, influences, and may come to control, the force of heredity; it is itself a part of the physical and social environment; it assists in the formation of will. By consciously directing, through education and otherwise, these forces, we shall in time have the true superman of our modern dreams, as well as the ideal people of Plato's Republic. But, unlike Plato and Shaw, we shall have to work through, not without, the family as an institution.

Since Sir Francis Galton a generation ago began to work on this question, the art of securing good heredity has come to be known as *eugenics*. For "good environments" J. A. Thomson uses the term "eutopia"; not the Utopia (no-where) of Sir Thomas More, but the "good-where." To complete the trio, for the "good will" I have ventured to use "eunoia," a classical and also New Testament Greek word (Plat. "Gorg." 486 A; Eph. 6:7, *et al.*), whose root reminds us of Anaxagoras and his ordering principle, *νοῦς*, and also appears in certain English derivatives, as noetic, noölogy, etc. The term "eunoia" suggests feeling and acting in accord with knowledge, and thus continues the traditions of Socratic intellectualism. We can agree with the Greeks that there is no virtue without knowledge, though we have to add there may be knowledge without virtue. But in the latter case the eunoia has not been formed. These

three "eu's" together constitute the empirical first principles in the making of men and women.

The third element, that of will, is the one least regarded in such discussions as this tries to be, as so much of our science manages its explanations only in physical terms. For this reason I have paid especial attention to it, representing as it does the really indispensable element of individuality in man-making. Though I have rarely been able to discuss the matter of will with teachers and students without having questions concerning "free-will" naturally arise, it seemed after much reflection best on the whole to reserve the treatment of this large problem till another occasion. Our argument indeed implies human freedom, but its adequate discussion would have taken us too far afield from the main line of thought. This I discovered after having written on this problem as briefly as possible.

Really it requires a biologist, such as I am not, as well as a psychologist and philosopher, such as I try to be, to discuss these topics in an ultimate way. But I have sat gratefully at the feet of the biologists and have sought to secure the larger doctrines at least that they teach concerning the life-problem. For a review and criticism of the somewhat technical pages 16–18, on heredity, I am indebted to Professor W. E. Castle, of Harvard.

That the conclusions of this book go beyond the forces of heredity and environment into the region of individual will in the explanation of men and women is to be credited rather to the philosophy of life that I hold than to the science I have learned.

"Freedom is the truth of necessity," said Hegel; "mechanism is universal but secondary to teleology," said Lotze; and in philosophy I find the freedom and the purpose of the existence whose necessity and mechanism science lays bare. We need to-day a popular philosophy that shows how the mechanism of science is itself a product of the free inquiring spirit of man. To me it is a sad spectacle to see keenly intelligent men throwing themselves as a mass of mere matter before the Juggernaut of scientific necessity which they themselves have constructed.

The following pages are not such a popular philosophy; perhaps they can claim, however, to be an application of such a philosophy. Please let no expert in these subjects of heredity, environment, will, mechanism, and teleology suppose that I have contemplated an addition to our human knowledge in these pages. My more modest and less conspicuous purpose has been to help make available for those who love children and the race what the experts already know.

But there is one thing I have had in mind. Our educational procedure in America has been what the philosopher Kant would call "dogmatic," that is, we have gone on somewhat blindly believing in education and in its ability to make men and women, as Kant himself indeed did, without once thoroughly raising the question whether and to what extent education could make a man. There are many signs to-day that "A Critique of Education" would be welcome. Its problem would be to mark out the limits of education. The following pages by making

us aware of such limits may at least serve, I trust, as prolegomena to such an educational criticism.

Concerning the origin of the work, "Please come and tell us some of the things we all believe and work for without having the time to formulate or even think about," is the message between the lines that I have read in many invitations to address gatherings of teachers, high-school commencement audiences, women's clubs, church conferences, and similar bodies. Upon many such occasions in different places, I have spoken in a free and informal way upon "The Making of Men and Women." Each time my auditors have encouraged me to return to the theme with greater zest, and each return has emphasized in my own mind the greatness, the timeliness, and the endlessness of this topic. In more systematic form the material has been presented in the classroom to my former Dartmouth students; also at the summer session of the University of California, 1909; also, during the past winter, in the Brooklyn Institute of Arts and Sciences, as one of the extra-mural courses of New York University. Should this volume fall into the hands of a reader who finds it in places already familiar, I hope it will remind him pleasantly of the time we discussed these matters of our common interest face to face. And should students of my "Philosophy of Education" find only an expansion here of certain views there briefly expressed on pages 252–254, they would be correct in considering this but the "sequel" to that, and they would be following the line of development my own thought has taken in the past few years.

It is always hazardous to anticipate what place a book may make for itself. Our colleges and universities, normal schools and teachers' reading circles, are studying what has come to be called "the principles of education." Several excellent recent texts on this general subject have appeared; some of these texts, however, purposely omit any account of the philosophical foundations of school work. There is an almost universal need for clear views, if they may be had, on the first principles, practical and theoretical, in the science and in the philosophy of educating and man-making. This book tries to supply this need; it could be used in the courses above indicated either as a main, or as a supplementary, text. And if all those parents, teachers, and social workers who have the will to help the present generation and the future race should find here some light, guidance, and inspiration, it would be very gratifying to the author.

For the busy person who reads prefaces and dips into pages here and there, the scope of this discussion will be evident from a glance at the Table of Contents. First, we must try to state the problem of education in man-making (Chap. I). Then we must treat of education in its relation to each of the elements of man-making; viz., heredity, environment, and will (Chaps. II, III, IV). Finally, having reached the limits of our knowledge, we can exercise the human privilege of following our thoughts into the speculative region beyond knowledge and inquire what the philosophy of these processes of man-making may be (Chap. V).

As I write these final words, the earth's atmosphere,

laden with the smoke and dust of the day's work, catches in splendor the rays of the summer sun declining toward the west; so do even the tokens of toil add new glories to the evening of rest.

Leonia, New Jersey,
June 30, 1910.

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IDEALISM IN EDUCATION

CHAPTER I

THE PROBLEM OF EDUCATION IN MAN-MAKING

Man-making the Occupation of the Ages.

THE making of men and women, — this is the occupation of the ages. The world has been busy these æons in bringing forth a man. By what method the world has worked, whether by the Laplacian nebular hypothesis or by the new Chamberlain planitesimal hypothesis, we are not sure. What other products, higher or lower than man, whether on Mars as surmised by Professor Lowell or on other planets, the world has produced, we cannot say. Our ignorance as to nature's vaster processes and products is full, and we see but a little way. But out of the fulness of our ignorance and the emptiness of our knowledge, we are able to assert that man is what the labor of the heavens and the earth has brought forth. He stands at the summit of the evolutionary process as so far unfolded. What greater beings may later arise we can only surmise. But whatever they may be, man is on the way toward them. The universe of the past has produced man as its highest product, so far as his knowledge can discover, and the universe of the future will use man in any greater work it may have

in hand on our planet. Small wonder that Professor Fiske[1] saw that in the light of his great origin man might anticipate a great destiny. Otherwise we should have to write "unreason" at the heart of the universe, which was able to begin but not able to complete a masterpiece. This, however, we are loath to do in view of what man's poor reason has already been able to see of rationality in the universe at large.

There is Mind in Our Universe.

Man must beware of easily assuming that all nature is unconscious, that the animals alone share consciousness with him, that he alone is self-conscious. It may be true, but we do not know enough as yet to assert it. Rather our minds must be open to the possibility of consciousness in both directions, toward the infinitely small and toward the infinitely large. The electron may turn out to be, as Leibniz might have supposed, a point of conscious force, and the whole stellar universe may be only the body of a wondrously beautiful spirit. We do not know enough to deny the possibility of these things; and some think, Fechner for one, we know enough to affirm their actuality. In any event we live in a universe where mind is, whether its limits must be drawn far or near.

The Greatness and Littleness of Man.

Man may exalt himself, for he is the highest self-conscious creature he knows; he must also humble himself, for he lives in a universe of which he is very ignorant, and whose confines it is easy for his imagination to people with beings superior to himself. Man must not be Philistine enough to suppose his

[1] John Fiske, "The Destiny of Man," Boston, 1892.

existence is the centre of spiritual gravity, nor must he be abject enough to suppose his existence does not weigh in the general balance of things.

From Unconscious to Conscious Evolution.

Now the natural processes by which this exalted and humble creature, man, was produced wé suppose, without knowing, to have been unconscious. The nebula or the planitesimals were, but knew not that they were. So we suppose. And through the action of laws inherent in this world-evolving stuff, living matter, plants, animals, and man, came about. The evolution of a conscious being was by unconscious processes. So science commonly supposes; but whether philosophy may be compelled to revise this conclusion we may later inquire in our final chapter. But man, the conscious being, studies out the unconscious processes whereby he was produced. Thus he becomes informed as to the forces that made him. Through understanding these forces, he can to an extent control them. Thus he begins to assist in his own future making. So what was unconscious evolution produces a conscious man who begins to take part in his own making. Thus the progress is from unconscious evolution through man to conscious evolution.

Man's Dream of Self-improvement.

We of this generation are just realizing that humanity is a process of conscious evolution. This thought we have from the handling of the Darwinian conclusions by the students of mind. Man by his intelligence has won the information from the universe concerning the processes whereby it made him; these processes he can partly control; thus he becomes a conscious partner with his mother nature in his own

future making. So we catch the vision in fact of the greater man which Plato in his "Republic" caught in fancy. Our times are charged with the sense of the potencies of future manhood. Burbank, working empirically, and De Vries, working scientifically, have wrought wonders in producing new specimens of beautiful and useful flowers and plants. The breeders of animals of superior blood and pedigree have for ages pointed the way toward the improvement of the human stock. Galton and Pearson have founded the new science of eugenics to provide the starting-point for a new race of men. Nietzsche and Shaw put the longings of the time for the superman into prose and poetry. The dream of a new manhood seems realizable. Nature by processes now known to us produced man in a long period of time; why may not the greater man be produced by controlling these processes in a shorter period of time? Where consciousness comes in to control unconscious processes, the evolution and mutation may be by leaps and bounds. Human society contains now many variations from highest leader to lowest follower. By the conscious manipulation of the force which produced the highest, why may not the level of the lowest be indefinitely raised, and the general average of humanity be lifted? So at least runs the dream at present concerning the improvement of the human species.

The Multiplication of Human Efficiency.

And it is possible really to increase the ability of the human stock. Reason, observation, experience, and the possibility of progress, — all indicate that the conscious effort of man can so second the unconscious labors of nature that time may be abridged and that

human powers may be multiplied. In any case mental endowments already present may be raised to the *n*th power, and at best we know not what surprises to anticipate in the way of new mental attainments.

Knowledge and Use of Life Forces demanded.

The realization of the dream concerning the improvement of man demands a wide understanding on the part of the people of those processes whereby we have come to be what we are, and the use of such knowledge. The people in the community most concerned in the making of the new type of men and women, this most promising and practical of all human endeavors, are naturally the parents, the citizens, and the teachers. To them is committed, if they only knew it, the conscious manipulation of those forces which determine the human character. They are answering the question in fact, whether they know it or not, concerning the men and women of the coming ages.

The Forces of Man-making.

But what are the forces that make men and women? As the chemist by electrolysis dissolves the complex liquid we call water into its constituent elements, so our question by the analysis of thought would separate complex human nature into its constituent elements. Let us recall an utterance of Shakespeare. "Some men are born great, some achieve greatness, and some have greatness thrust upon them." "Some men are born great," — this is the element of heredity. "Some have greatness thrust upon them," — this is the element of environment. "Some achieve greatness," — this is the element of individual will. Only, as a matter of fact, each of these elements helps to constitute every man. Heredity, environment, and will are

the names by which we call the elements that in their mixing make men and women.

Our Problem.

At this point we catch sight of our problem, viz., what are the first principles in the making of men and women? How much can education aid in this process? To what extent are the forces of heredity, environment, and will subject to the influence of education? What can teachers, parents, and citizens do in the way of controlling these forces through educational insight and direction, and otherwise? And particularly, at the end, is it possible to unify and spiritualize the processes of man-making? In the following chapters it is our purpose, first, to consider the main facts concerning heredity, environment, and will; in each case to suggest how far education can utilize these forces in producing upon the earth a greater race of dwellers; and in the last chapter to find, if we can, the philosophy of the processes of man-making.

Thomson quoted.

The grip of our problem is so manifest in the following passage from Thomson, and as it is so helpful to us to see a problem whole, I will transcribe his words here: "Since the issues of the individual life are in great part determined by what the living creature is or has to start with, in virtue of its hereditary relation to parents and ancestors, we cannot disregard the facts of heredity in our interpretation of the past, our conduct in the present, or our forecasting of the future. Great importance undoubtedly attaches to Environment in the widest sense, — food, climate, housing, scenery, and the animate *milieu;* and to Function in the widest sense, — exercise, education, occupation, or the lack of these; but all these potent influences act

upon an organism whose fundamental nature is determined, but not rigidly fixed, by its Heredity, — that is, we repeat, by its genetic relation to its forebears." [1]

Saleeby quoted.

The recent notable eugenic work of Dr. Saleeby shows a similar grasp of the elements involved in the problem, if only we will bring together passages from different places, as his tendency is to stress heredity and environment to the practical exclusion of will, except when incidentally it forces its way unobserved into the discussion. He writes: "Granted that the highest of all objects is the making of worthy human beings, it is quite evident that we must attend equally to the two factors which determine all human life — heredity and environment. . . . The incomparable superiority of intelligence depends upon its limitless and creative character, in virtue of which, as Disraeli puts it, 'men are not the creatures of circumstances; circumstances are the creatures of men.' . . . We may also dismiss, as based upon nothing better, the idea that the great [national] tragedies of history were necessary events at all. We must look elsewhere than amongst the inherent and necessary factors of racial life for the causes which determine these tragedies; and we shall be entitled to assume as conceivable the proposition that, notwithstanding the consistent fall of all our predecessors, the causes are not inevitable, but, being external and environmental, may possibly be controlled: man being not only creature but creator also." [2] No advocate of will as a men-

[1] Thomson, "Heredity," N. Y., 1908.

[2] Saleeby, "Parenthood and Race-Culture," N. Y., 1909, pp. 29, 149, 257–258.

tionable force in the making of individuals and of nations would ask for more than the two last passages give, while the first passage grants a little more than sufficient emphasis to the other two factors.

The Greatness of this Problem.

The solution of this problem, theoretically and practically, is worth all the time we can give to it, and more. It is the problem that underlies all problems. How to assist nature in making the greater man is the fundamental question that faces men in the present stage of their evolution. Man is the most valuable thing we know, far more valuable than any or all of his possessions. Ours is a commercial age, they say. But the man is greater than a sheep. Ours is a machine age, they also say. But the man that runs the machine possesses the value. Both the practical captains and the theoretical students of industry and machinery put the emphasis on the man. It is still the greater type of man for whom society waits and longs, the more efficient man both to protect and to serve, — the man of the prophetic conception who shall be "as a hiding place from the wind, and a covert from the tempest; as rivers of water in a dry place, as the shadow of a great rock in a weary land."

REFERENCES ON CHAPTER I

Calderwood, H., Evolution and Man's Place in Nature, London, 1893.
Darwin, C., The Descent of Man, N. Y., 2d Ed., Rep. 1906.
Drummond, H., The Ascent of Man, N. Y., 1894.
Fiske, J., The Destiny of Man, Boston, 1892.

Haeckel, E., The Evolution of Man (Tr. McCabe), 5th Ed., N. Y., 1910.
Hibben, J. G., "The Philosophical Aspects of Evolution," *Philosophical Review*, March, 1910.
Huxley, T. H., Man's Place in Nature, N. Y., 1896.
Jordan and Kellogg, Evolution and Animal Life, Chap. XXI, N. Y., 1907.
Saleeby, C. W., Parenthood and Race Culture, N. Y., 1909.
Tyler, J. M., The Whence and Whither of Man, N. Y., 1897.
—— Man in the Light of Evolution, Boston, 1899.
Wells, H. G., A Modern Utopia, London, 1905.

CHAPTER II

HEREDITY AND EDUCATION

Outline of this Chapter.

LEST we get lost in the many details of this chapter, I propose that we follow this general outline, the stages in which will be indicated in the discussion as we proceed. First, we must consider the fundamental place of heredity in life; then, the nature of heredity; then, the mooted question of the inheritance of acquired characteristics; then, capacity as an inheritance; then, the use of heredity in making progress; then, the practical bearings of heredity on education; and finally, lest heredity be unduly magnified, the abuse of the law of heredity. If any remain undaunted after this outlay, we will proceed. The general reader will of course exercise his privilege in electing his courses.

1. The Fundamental Place of Heredity.

The Witness of Biology.

The first in time and importance of the elements of man-making is heredity. Biology indeed ordinarily teaches that heredity and environment made the organism, animal and human. It abstracts from any influence the individual will may exert in the development of the organism. So far as education is concerned, biology sees in it but one of the many influences of the environment exerted upon the organism; and further, biology commonly teaches that the education of this generation exerts no influence by means of physical heredity upon the

next generation; the education of one individual is so external an addition to his nervous make-up that his offspring show no traces of it in their physique. Consequently biology believes that the influence of education in the making of man is limited in two very important respects, viz., first, by the other influential elements of the environment, and second, through the stoppage of educational results with the generation upon which teachers work. Some students of the subject find a certain grim pleasure in thinking that the succeeding generations are not burdened by the educational and other failures of this generation, that we start fresh with nature's handiwork in each new generation unencumbered by man's past bungling. This latter question will concern us later when we come to discuss the so-called "inheritance of acquired characters." Meanwhile it is important to hold in mind the fundamental place biology assigns to heredity in the production of new organisms, and the two respects in which biology considers the influence of education to be limited.

Illustrations of Heredity.

A case illustrating the influence of heredity as against that of education is furnished by the Filipino Pedrito, a member of the Negrito tribe, who was thoroughly educated in the languages by an interested Bostonian. Pedrito travelled extensively, but finally disappeared, only to be accidentally discovered later by a German scientist among his native tribesmen. One is reminded of Carlyle's saying, "Civilization is only an envelope under which the savage nature of man can burn forever with an infernal fire."

Pedrito.

A similar instance is that of Meme, an Eskimo

Meme.

youth, who was brought to New York by Commander Peary in 1896, together with a small party of Eskimos. The others all died of tuberculosis. Meme came from the region of the Humboldt Glacier on the northwest coast of Greenland; his people live within two hundred and eighty miles of the pole, being the most northerly race. His father, who made one of the party, also died, his body was embalmed, and his skeleton is now on exhibition in the Museum of Natural History in New York. The superintendent of the museum adopted Meme, and sent him to Manhattan College. Here it was that he decided to renounce civilization, which he did, expressing his reasons in the following letter to a friend :—

"When this reaches you I will be well on my way, as it will not be mailed for three days. No matter what happens, I won't forget you or what you have done for me, my good old friend. You made a brother of me when all the others that were responsible for my being stolen from my own country failed.

"There was no reason why you should have been so kind to me when you just happened to meet me, but you have a big heart and understand what the others can't. I don't see any chance in New York, and I don't want to be a burden to you any longer. You would go on helping me always, and I feel terrible about it, so I am going away to give you a chance. They won't give me my father's body out of the museum and they never keep their promise, so I am disgusted and will leave it all if I can. You and Mr. Wallace have been true friends and I would die for you, but I won't stay and bother you.

"Never mind where I am; I am just working north. I am homesick and disgusted, and when Commander Peary, who brought me to New York, told me he had no room for me on his ship, I lost hope; and then when Professor Bumpus, of the museum, refused to give me my father's body so that I could bury it, or give me even his sled and gun, I gave up believing that your Christian belief which you taught me was meant for a poor Eskimo. After all, my own people are more human and kind, and I am going home; your civilization has done nothing but harm for me and my people. Good-by."

D'Alembert.

A case of a different kind, equally illustrating the power of heredity, is that of a certain gamin in Paris, without known parentage or open opportunity, developing a genius in mathematics and philosophy, who was finally on his merit elected to membership by the French Academy. It was D'Alembert.

Inheritance of Criminality.

A special case of heredity is the transmission of the criminal type, as indicated by the study of criminal anthropology. In 1850 Broca founded the Anthropological Society in Paris, and referred to certain characteristics of the skulls of criminals, starting thus a new kind of phrenology. In 1868 in his work, "Variations of Animals and Plants under Domestication," Darwin developed the concept of "atavism," or reversion to earlier types. Modern students of the criminal, like the Italian Lombroso and the Englishman Havelock Ellis, establish the criminal type anatomically, physiologically, and psychically. The criminal is a case of atavism; he has the feelings and instincts of primitive man. He has a receding fore-

head, poor senses except eyesight, and shows "prognathismus," that is, projection of the jaws. And the characteristics of the criminal type are transmitted by heredity, as the family of the Jukes in New York State strikingly illustrates. In this connection it is important to note that environment coöperates greatly with heredity in the making of a criminal. There is not so much an inheritance of criminality as of those weaknesses of character, that lack of inhibition in the nervous system, which are the fertile soil in which the seeds of crime sown by an evil environment flourish rankly. Probably "no specific tendencies to crime are inherited. Certain general mental conditions may be inherited which serve as good soil for criminal tendencies to grow in. But the training is the real decisive factor."[1] A criminal father transmits those weaknesses to his child which lead the child easily into the temptation of following the father's example.

The Use of the Doctrine of Heredity in Literature.

As in other cases of scientific doctrine, for example, of double personality, so also here, literature has taken up these notions of heredity and used them for its own purposes. The Hebrew laws already recognized the visitation of sins of parents on children. Ibsen's "Ghosts" shows we are the walking embodiments of past ancestors. Zola's "Human Beast," ranging wider, indicates the impossibility of our escape from the animal inheritance within us. Mrs. Wharton, in "The House of Mirth," represents Lily Bart as the theatre of greater than individual forces that finally destroy her life and all but destroy her soul. In May Byron's poem, "At Bay," one stanza runs as follows:

[1] E. L. Thorndike, "Human Nature Club," N. Y., 1901, p. 194.

"My child is mine.
Yet all his gray forefathers of the past
Challenge the dear possession: they o'ercast
His soul's clear purity with dregs and lees
Of vile unknown ancestral impulses:
And viewless hands from shadowy regions groping,
With dim negation frustrate all my hoping."

The French writer M. J. Guyau gathers these and other things about heredity together and shows the limits they establish to the influence of education in his volume, "Education and Heredity" (London, 1891).

2. The Nature of Heredity.

The term "heredity" has two distinct uses that must be held apart in our minds if we would avoid confusion. There is a physical heredity and there is a social heredity. By social heredity is meant the influence of tradition, passing down from generation to generation by word of mouth, example, and imitation. This great influence in moulding us belongs with the other influences exerted by environment which will be discussed in the succeeding chapter. In the present connection physical heredity alone is under consideration.

The Two Meanings of the Term Heredity.

The Nature of Physical Heredity.

Physical heredity is the transmission from parent to offspring of certain distinguishing characters of structure and function. It is the result of the union of two germ cells. By this process of the transmission of distinguishing characteristics, physical heredity introduces a certain unity into the living organisms of past, present, and future. At the same time a certain variety is secured through the fact that all the higher organisms have two parents, and also through the so-

called tendency of "natural variation," which is not very well understood.

The Law of Heredity.

Now the action of the forces of heredity may be stated roughly in the form of a law, viz., like begets like. It is a very simple and elementary law whose action does not surprise us in the plant, lower animal, and physical portion of the human world. We take as a matter of course the unexceptionable phenomena of resemblance between offspring and parents in species, form, and function. It is also true for reasons indicated above that like begets unlike, no child resembling either parent exactly. Only where birth was by partition of the parental cell could such resemblance exist. Unlikenesses between offspring and parent must always appear where there are two parents. Still, the deeper law is that like begets like, for it is in accord with this law that the dissimilarities between the offspring and a given parent appear. In the vegetable world we expect every seed to bear after its kind, we expect to reap what we sow, we do not expect to gather grapes of thorns or figs of thistles. In the animal world likewise we are accustomed to the offspring being like the parents. The appearance of mongrels and hybrids among plants and animals only emphasizes in our mind the fact that the posterity is the conjoined characteristics of the ancestry.

The Application of the Law of Heredity to the Physique.

And the same law, like begets like, does not surprise us either in the human world, so long as we read it merely in a physical sense. Of course children resemble their parents in face, form, height, color of hair, and eyes. It is to be noted that the resemblance to parents shows three types of variation.

Sometimes the resemblance to one parent rather than to the other is striking, — this is "predominant" inheritance. Sometimes there appears a fusion of characteristics, as the mixing of the white and black race giving the mulatto, — this is "blended" inheritance. Still again, sometimes the child is like his father in some respects and like his mother in other respects, — this is "particulate" inheritance.

The Work of Mendel.

In one respect the child not simply is like, but is, his father; in another, is his mother. The child may have the color of his eyes from his father and a gentle disposition, or musical ability from his mother. The color of his eyes is not some color between the brown eyes of his father and the blue eyes of his mother. There seem to be certain "unit-characters," as the flower-loving Austrian abbot, Gregor Mendel, called them half a century ago, which are received in their integrity by the offspring from the parents. It is further remarkable that among these characters some give way to others; the "recessive" ones give way to the "dominant" ones, and in a certain definite ratio. Where one parent is brunette and the other blonde, the application of the law of Mendel leads us to expect in the large three times as many brunette children as blonde. The brunette characters are dominant over the blonde ones. It is commonly supposed that "opposites attract" in mating, which would be a kind of instinctive way nature would have of securing variety in mixing characters. This, however, like many other common suppositions, is a mistake. It is also true that "opposites repel." There is no law in the case. Blondes and brunettes, tall and short

people, mate with their like as well as with their unlike. But, however the mating, the law of physical heredity shows the offspring to be the union of "unit-characters" received from the parents.

The Law of Sir Francis Galton.

But we have to note also that our inheritance is also from earlier ancestors. We inherit not simply from, but also through, our parents. Children often strikingly resemble other relatives than their parents. The color of the hair, red for example, may have skipped a generation. When children resemble an aunt or an uncle, it is because these two have inherited from a common ancestor. When children resemble their grandparents, it is a case of direct heredity through the parental organism. In fact, we must greatly enlarge our ordinary notions of physical heredity. By no means is it to be limited to the influence of parents on children. The whole line of past ancestors have had their share in the making of any family of children. Sir Francis Galton has formulated this wider law of physical heredity in this form: "The two parents between them contribute on the average one-half of each inherited faculty, each of them contributing one-quarter of it; the four grandparents contribute between them one-quarter, or each of them one-sixteenth, and so on." That is to say, one-half that we inherit comes from our parents, one-quarter from our grandparents, one-eighth from our great-grandparents, and so on back to the first man. The fraction, of course, soon becomes negligibly small, but in a sense it is true that we are all thus the walking embodiments of the selves of our ancestors.

They live in us as we too shall live so long as our posterity survives, according to the familiar saying, "The dead rule the living." The stream of life flows on; its origin we do not exactly know; its conclusion we cannot exactly foresee; the stream is too long for us to scan either its source or its mouth: but this we know, once to have received and transmitted it ourselves gives to each parent a kind of physical immortality.

The Application of the Law of Heredity to the Mind.

But the action of the law of heredity does begin to surprise us when we extend its application beyond the physical into the region of the intellectual, the emotional, and the moral. But just as we have physical heredity so do we have intellectual, emotional, and moral heredity. Just how the living cells from the parental loins that constitute the body of the new child also convey to him his soul, we cannot say. It is the old puzzle of the relation of brain and mind. But about the soul of the new-born child we must say as we say of his body: he has it from the souls of his parents. As the union of bodies gives a new body, so the union of souls gives a new soul. The material elements here, as doubtless everywhere, are the bearers of a psychical life. The new individual, body and soul, is the product of his ancestry, particularly of his parents. We do not need to suppose that God created so many souls in the beginning, one for each individual who should be born into the world; nor that He now creates a new soul for each individual, at the moment of conception, or quickening, or birth. All that we need to suppose is that creating is really a process of

change of what exists; and, as the new body is the union of parental germ cells, so the new soul is the union of the psychical elements which those germ cells convey. How they convey any psychical elements at all is a part of the same problem as to how the brain of any one of us permits our consciousness to continue. The wonder and the mystery of the physical transmission of mental characters led Professor Shaler to argue for the immortality of the soul.[1]

The Inheritance of Mental and Moral Traits.

We have next, then, to note that the resemblance of posterity to ancestry is mental and moral as well as physical. In the fourth annual Huxley Memorial Lecture Professor Karl Pearson made his famous address on "The Inheritance in Man of Moral and Mental Character." The following is a summary of his results:

"The irresistible conclusion was that if man's physical characters were inherited even as those of the horse, the greyhound, or the water-flea, what reason was there for demanding a special evolution for man's mental and moral side? If the relation of the psychical characters to the physical characters was established, what was its lesson? Simply that geniality and probity and ability might be fostered by home environment and by provision of good schools and well-equipped institutions for research, but that their origin, like health and muscle, was deeper down than those things. They were bred and not created. It was the stock itself that made its home environment, and the education was of small service unless it were

[1] N. S. Shaler, "The Individual," Chap. XV., N. Y., 1901.

applied to an intelligent race of men. . . . No scheme of wider or more thorough education would bring up in the scale of intelligence hereditary weakness to the level of hereditary strength. The only remedy, if one were possible at all, was to alter the relative fertility of the good and bad stocks in the community."[1]

Similarly Thorndike writes, "Eminent mental ability, then, and presumably mental ability in general, is mainly the result of germ inheritance, not of nurture or education, so far as we can at present see."[2] Also, the same author, as follows: "In the same way and for the same reason that tall parents have tall children or dark-haired parents dark-haired children, so also stupid parents have stupid children, hot-tempered parents have hot-tempered children, and musical parents musical children."[3]

Our mental and moral gifts and defects, the emotional tendencies toward grave or gay, the moral inclination toward right and wrong, the peculiar little mental twists and turns that charm or frighten our associates, — all these we inherit from our ancestors as truly as we inherit their blood, race, and nationality. True, these mental traits show their little variations from generation to generation, due to the mixture of two parents in each child, and due also to the tendency of all living structure to vary in time. But these variations, as we shall later observe, are our opportunity of conscious progress. The intellectual child, then, is not a happen-so, nor the lazy child, nor the weakly,

[1] *Science*, Vol. XVIII, 635–636.
[2] "Human Nature Club," p. 184.
[3] "Elements of Psychology," N. Y., 1905, p. 195.

emotional child, nor the industrious child, nor the honest child. These, and all the other mental traits which together constitute that psychic complex we call his soul, are really the equivalent on the mental side of certain definite elements in his nervous system inherited from his ancestors.

Reversion to the Normal.

There is a tendency in heredity to return to the normal type. The son of a genius is not himself a genius, though probably he is above the average. The son of a great man may in some respects consider himself unfortunate; people expect from him so much more than is in him. The sons of Lincoln, Darwin, and Tennyson are well-known men, but their variation from the normal is less than that of their fathers. Similarly the son of a man of small capacity tends to be more intelligent than his father, though probably he is below the average. The son of a diseased man tends to be more healthy than his father. The son of a short man is likely to be taller than his father, of a tall man is likely to be shorter than his father. The same principles, of course, are true of inheritance from the mother. The fact of two parents helps to explain this tendency of reversion to the normal, but especially is this tendency due to our inheritance from the remote ancestry. Really our inheritance is not dual, but multiple. It is our multiple inheritance that explains the tendency to reversion.

Inbreeding.

The case of inbreeding deserves special mention. It is commonly supposed that inbreeding causes weakness. The fact seems to be rather that the inbreeding is not the cause of the weakness, but simply brings to the surface any inherent weakness. It is a

popular notion that the royal lines through much inbreeding have become degenerate. The facts are that the royal lines are not so degenerate as reputed, that the inbreeding has brought out any latent weakness, and also that the inbreeding has preserved the inherent strength of the line.[1] Of course too close inbreeding among relatives is fraught with danger to sanity through bringing out native instabilities in the nervous system. But the strength of a race is preserved by inbreeding among its own members. A notable illustration of this is the wonderful purity through a long period of time of the Jewish race. Because of the fact that some native weaknesses are common, which inbreeding would bring out of their latent condition, it is customary in the artificial evolution of a stock to alternate periods of inbreeding with periods of cross-breeding.

The Gradual Appearance of Heredity.

Another significant fact about the action of heredity is that inherited qualities do not all appear at birth, but develop as the offspring grows. This is natural. The organism has notable periods of unfolding, from childhood, through youth, to manhood. The inherited qualities come out especially during the adolescent period. This is the time when blood tells most. It is not possible for any parent or teacher to say what is in a boy or girl until adolescence brings it out. This is one reason why no boy or girl should have quit school before or during the adolescent period. This is the time when the school can do most in discovering to each individual his bent, and in assisting

[1] F. A. Woods, "Recent Studies in Human Heredity," *The American Naturalist*, Vol. 42, No. 502.

him into the line of work and usefulness where his greatest capacity lies.

3. Are Acquired Characters inherited?

It is quite true that any given individual during his own lifetime may acquire new characteristics which he himself did not inherit. He may learn to do things for which he had inherited no tendency. He may learn to speak the English, rather than the French, language; to smoke, to drink, to be profane; he may lose a limb or an eye; he may receive a wound that leaves a scar for life; he may be dreadfully sunburned; his skin may become callous through use at certain points; his occupation may deform his skeleton; overexertion may bring on heart disease; a muscle may be atrophied through disuse. He may become a Protestant, turn Catholic, give up his bad habits, learn a new trade, or change his citizenship. Such like new acquisitions of the individual during his own lifetime are called "acquired characters." An acquired character, speaking technically, is a somatogenic modification, not a blastogenic variation; that is, it is due to a change in a function of the organism or to the influence of environment rather than to constitutional inheritance.

Their Nature.

Are they inherited?

Now a question of very great racial importance arises, viz., are acquired characters inherited? The popular opinion is that they are; the scientific opinion seems to be that some acquired characters may be inherited. It is a very old question. As in so many other instances, Plato has anticipated this question and has suggested an answer, as follows:

"Also, I said, the State, if once started well, moves

with accumulating force like a wheel. For good nurture and education implant good constitutions, and these good constitutions, taking root in a good education, improve more and more, and this improvement affects the breed in man as in other animals.

"Very possibly, he said."[1]

This is clearly the doctrine of the inheritance of the good effects of education, of improving the stock by nurture.

So the matter stood in general until the scientific nineteenth century. During the fifty years succeeding Darwin the question has been warmly discussed on both sides.[2] The real question, technically stated, is, do functional or environmental modifications of a parent's body so affect the gametes or germ cells that the offspring shows the original modification or its representative? Darwin seems to have defended the affirmative, though the question was not very clearly formulated in his time. Haeckel, Spencer, Eimer, Cope, and especially Lamarck, say yes. Sir Francis Galton, Karl Pearson, perhaps the rank and file of biologists, led especially by Weissman, say no. In the present state of our knowledge, no categorical answer seems possible either way. The facts are not all on one side. Some acquired characters may be inherited, others certainly are not.

The Affirmative Side of the Question.

Among acquired characters that *may* be inherited, I do not say, *are* inherited, should be mentioned the atrophy of useless or unused organs; the blindness

[1] "Republic," IV, 424 A (Jowett, Tr.).

[2] For the history of this problem, cf. J. A. Thomson, "The Science of Life," 1899.

of creatures living in caverns and underground, as the fish in the Mammoth Cave or the burrowing moles; the domestication of wild animals; the acquisition of new instincts or the loss of old ones, as certain birds in the state of nature once trusting man and now fearing him; the decrease of the size of the jaw among civilized men; the inferiority of the senses among the Europeans; bad eyes among watchmakers and engravers; near-sightedness of city children; and the transmission of nervosity and madness. According to some recent experiments it appears that if the ovaries of one hen are transferred to the body of another, the young chicks will show the markings of the second hen. This would seem to show that the germ cells are influenced by the body of the parent that carries them, as Lamarck says, and not that the germ cells are independent of all somatic influences, as Weissmann's theory of continuity of germ-plasm claims. The hen here seems to come before the egg rather than the egg before the hen. Further, if wild ducks with long wings and small legs are confined a few generations, it appears that the wings are shortened and the legs grow stout. Here the effects of use and disuse seem to appear in the later generations, as Lamarck said.

The history of the development of the horse shows a similar result. In the words of Conn: "For example, as we study the history of the horse family, we find that an originally five-toed animal began to walk more and more on its middle toe, in such a way that this toe received more and more use, while the outer toes were used less and less. Now that

such a habit would produce an effect upon the toes in any generation is evident; but apparently this influence extended from generation to generation, for, as the history of the animals is followed, it is found that the outer toes became smaller and smaller with the lapse of ages, while the middle one became correspondingly larger, until there was finally produced the horse with its one toe only on each foot. Now here is a line of descent or machine building in the direct line of the effects of use and disuse, and it seems very natural to suppose that the modification has been produced by the direct effect of the use of the organs. There are many other similar instances where the line of machine building has been quite parallel to the effects of use and disuse."[1]

The theory of the inheritance of acquired characters emphasizes the influence of the environment of the germ cells, and the doctrine that the effects of use and disuse are inherited emphasizes, by anticipation in this discussion, the part played by the individual.

The Negative Side of the Question.

Among the acquired characters that are certainly not inherited should be mentioned: savage perforations of lips, nose, and ears; savage removal of incisors or filings of the teeth; the rite of circumcision among Mussulmen and Jews; the thickened skin of the human heel; the compressed feet of Chinese women; and the mutilation of animals, for example, cutting off the tails of rats. The boy of English parents inherits no tendency to speak English; he would learn German like a native, if brought up by Germans.

[1] H. W. Conn, "The Story of the Living Machine," N. Y., 1899, p. 172.

The child of a father with only one arm, leg, or eye is born intact. The vices of the parents do not descend as such upon the children by physical heredity. If the vices have undermined the nervous system of the parents, then the children show not the specific vices, but general degeneracy, making them an easy prey to all bad influences. Likewise the virtues of the parents do not descend as such upon the children by physical heredity; the parental virtues have preserved the health of the nervous system unimpaired; the children are born with strong bodies; they are capable of high resistance to physical and moral evil.

This is the process by which the iniquities of the parents are visited on the children unto the third and fourth generation, and this the process whereby mercy is shown unto thousands of generations of them that love God. My child cannot inherit my virtues, but his greater strength is their witness, and through social heredity he can imitate them. Neither does he inherit my vices, but his greater weakness is their witness, and through social heredity again he can imitate them. "The effect of alcoholic excess is not an increased tendency to drink alcoholic beverages — the tendency itself shown in the children is accounted for as already congenital to the parent — but certain general deteriorating or degenerative changes in the nervous system or constitution of the offspring, as in hysteria, scurvy, idiocy, malformation, etc., which the parent did not have at all." This looks as though acquired characters are not inherited as such, though their effects may be. The view that acquired charac-

ters are not inherited emphasizes the influence of heredity as against that of environment.

Ribot's Conclusion.

In his great work on "Psychological Heredity," Ribot concludes on this question: "In general, accidental deformities and mutilations are not transmitted; we are not surprised that the child of a man with one eye or one arm has two eyes or two arms. Even the transmission of scars is not always established on very sure proof. But, apart from the modifications due to local, partial, or brutal causes, there are those which result from slow action, which intimately affect the living organism by nutrition and even by education. The experiences of teachers are not calculated to weaken the belief in a transmission of certain acquired characters."[1] This last is a precious passage for those teachers who believe they are working for the easier education of the future race as well as for the education of the present generation. If certain acquired characters may be inherited, we may suppose that the education of this generation makes more educable the nervous system of the succeeding generations.

Conclusion. We transmit by Heredity our Heredity.

At some near-by future time we may know better just what influence the life-history of the individual parent has upon the child, but at present it seems safe to say that specific acquired characters are not transmitted to the offspring, though, on the other hand, the offspring does show the effects of use and disuse, and of any influences that have permeated or poisoned in any way the physical life of the parents. A short way of stating the doctrine would

[1] Preface to the eighth French edition, p. vi, Paris, 1906.

be, we transmit by heredity only our heredity, not our acquisitions; but any effects of our acquisitions upon the vital forces, for good or bad, are transmitted. Suppose a man inherits money from his father and from his mother; suppose he also marries a girl who has money in her own name; suppose he now lives on the interest of the capital he inherits, and also by engaging in business earns more capital; the son of the match will inherit the joint capital of father and mother, plus what his father has earned, but he will not inherit necessarily the tendency toward a business life.

4. Capacity as an Inheritance.

What we Inherit.

Just what, then, does heredity contribute to man-making? More specific things than we can enumerate, but there would notably appear in the list these four things, viz., instincts, temperament, constitution, and capacity. The greatest of these is capacity. Instincts are inherited nervous mechanisms which enable us to act usefully without having learned, as the instinct of acquisition. Temperament defines our general emotional and practical attitude toward the world, whether strong and quick ("choleric"), strong and slow ("melancholic"), weak and quick ("sanguine"), or weak and slow ("phlegmatic"). Our physical constitutions, whether strong or weak, with the attendant train of consequences, are likewise the fruits of inheritance. And most significant of all for the man, capacity, which is the limit of possible attainment, is an inheritance.

Capacity.

What we are capable of becoming in body, in intellect, in morality, in art, in religion, with our utmost effort, — this is our capacity. Perhaps the word

"capacities" would be better, as we differ so in our ability in different lines. Every potentiality of development is an inheritance. We cannot by taking thought add a cubit to our physical or mental stature, or to the physical or mental stature of any other being. Teachers cannot develop a ninety per cent mathematical ability where only a seventy-five per cent is the limit of the inherited capacity. A mark indicating attainment may be given, but not the ability that deserves the mark. In the same way inheritance sets limits to the possible development of morals and of physique. Of course we must beware of supposing we have reached the absolute limit of inherited capacity before we really have. Just what the physical formation of nerve-cells and connecting fibres is in the brain that conditions the different degrees of capacity we, of course, are in no position at present even to conjecture. But limit there is, as effects have causes and nothing happens without a cause. The cerebral elements represent the union of preëxisting elements.

The Capacity is General.

It is to be remarked at this point that heredity is rather of general capacity than specific ability. The daughter of a strong woman intellectually or morally may not be strong in her mother's way, but in some other way. So of the son. President Eliot is a great educator; a lamented son was a notable landscape gardener. This distinction is easily noted in the cases of famous sons descended from noble mothers, and of notable women whose fathers were strong men. In these cases the child has inherited a general capacity but not a specific ability. This latter

turns more on training. At this point the influence of environment appears.

We inherit Capacity, not Character.

Further, it is to be remarked that we inherit capacity, not character. We inherit certain limits to our attainment, certain dispositions, tendencies, inclinations, impulses, temperaments, temptations ; we do not inherit our actual attainment, our thoughts, deeds, habits, and the conscious life of man. The son of an inebriate will be weak physically ; he does not inherit the appetite for liquor, unless perchance such a craving was already congenital in his ancestry; least of all does he inherit what he will do with such craving. At this point the influence of the third element, the personal will, appears. Character is an acquisition, not an inheritance ; capacity is an inheritance, not an acquisition. The moral attainments of civilized man are a product of his will, not of his inheritance. Our character is what we become within our inherited limits.

5. Use of Heredity in making Progress.

In case capacities are inherited, in case specific acquisitions are not inherited, what is the possibility of any progress in the evolution of human capacity ? By way of illustration I will report the story of a little girl who was learning to count. "Papa," she said, "how much can anybody count ?" "Oh, little girl, you can just count on and on, and there isn't any end." "Papa," said she, "there is one end, isn't there ? that's the end you start at." So with heredity. It seems endless behind us, it seems endless in front of us, but we of this generation are at the point where the two ends meet. We are in the position of determining the future race, as we are in the position of be-

The Possibility of Progress in Human Evolution.

ing determined by the past race. It takes two parents to produce a new life. The union of strength with strength gives greater strength in the offspring, and the union of weakness with weakness gives greater weakness in the offspring, and there are all possible degrees in between. The fundamental method of improving the human species is by the right selection of life partners. This much at least of heredity young people ought to know, that they may marry indeed for love, but that they may be sure to love where the brains are. The combination of head and heart in love-making by the young people of this generation would alone appreciably lift the level of human efficiency. These are the lessons to teach young people, as they love themselves, as they love their kind, as they are called by the highest sanctions of nature to the perpetuation of the human species.

The Division of Responsibility between Past and Present.

When once we grasp the full import of the doctrine of heredity, we see the responsibility for the future race is divided between the present and the past; we realize how much of ourselves is not due to ourselves; we realize also that as acquired characters, as such, are probably not inherited, our ability to add to and take from the destiny of the race is somewhat diminished. Parents and children are partakers of the same vast enduring stream of life; the child and the parent are both the offspring of the common stream; parents and children are really brothers and sisters, with the life stream the universal mother.

Heredity is the Truth of Predestination.

There is a venerable theological doctrine known as predestination. Jonathan Edwards, John Calvin, St. Augustine, and originally St. Paul, have declared it to

be the true explanation of human destiny. The first morn of creation saw what the last day should reveal. The eternal counsels of the Most High have set to each man his part to play, both here and hereafter, which in no way can he escape. We will not discuss this theological doctrine as such. But I like to take these older views down out of the heaven of abstraction and consider what facts on the earth they can possibly mean.

Now to my mind the facts of heredity are the truth for which the doctrine of predestination can really stand. This generation was actually predestined in capacity by all the past generations, and the present generation is actually in a position to predestinate the capacity of the next. This view both keeps and destroys the rigidity of the old predestination; keeps it, for the past cannot be undone, and we are what we are in capacity; destroys it, for the future is unmade, but is in process of making by the present. One generation largely, not entirely, predestines the next. Parents are the co-workers with God in the making of a better human race. Through all the generations the thread of heredity runs, giving unity and solidarity to the human race. Herein is hope for human progress in that each individual may purify the life stream to a certain extent; here is a freedom of individual action for or against the welfare of the race in relation to the necessary laws of heredity; here is individual choice between polluting or cleansing the waters of racial life. Every parent has a share in the universal plan of predestinating the future results in terms of present causes. The gifts we have the power to bestow are life and its capacities

in the germ, good nutrition and care before birth, and the best rearing after birth.

6. The Practical Bearings of Heredity on Education.

The influence of heredity in the making of men and women is so profound and yet so subject to human control that at this point we must inquire concerning the practical ways of bettering the human stock by the right handling of this force. To sum up briefly what we now think we know about heredity and human improvement: The elemental way of improving the race is through the right union of parental germ cells. The chronological beginning of the elevation of human efficiency is in the union of life partners. Education cannot change capacity given by heredity; it can only develop it. There is no democracy in education in the sense that the school can turn out equal minds. Some minds have ten talents, others five, still others one. As Ruskin has it, "But apricot out of currant, — great man out of small, — did never yet art or effort make." The business of the school is to enable each type of mind to put its own inherited talent out to usury. What education does for this generation, the next generation probably does not physically inherit. Education develops, not endows, this generation; it also permits the acquisition of certain desirable characteristics. Of course, we are not speaking here of "social inheritance" through the influence of environment, which anticipates the next chapter.

The Relation of Education to Heredity.

The Elemental Way to improve the Race.

Even then if there should turn out to be no inheritance of acquired characters, an advantageous mixture of the parental stocks can breed a stronger race of

men. Plato long ago observed that dogs and horses of superior pedigree and blood could be bred by artificial selection of the parents, and in his ideal and impractical "Republic" made a similar provision through the control of marriage for a better human stock. In our day by crossing stocks Luther Burbank has worked marvels with fruits and flowers; in his little readable and valuable book, "The Training of the Human Plant," he thinks that the capacity of men may be similarly enlarged, and that America, with its diversity of stock, is a fit field for the experiment in race making. The practical difficulty of improving the human stock in this way in a free society is that men and women have liberty of marital choices. But as the animal shows us natural selection of parentage, as the stock farm shows us artificial selection of parentage, may we not look to education in home and school so to form the judgment of growing young men and women that society shall show us the rational, though individual, selection of parentage?

A Duty of Parents and Teachers.

Passing then at this point from principles to application, parents and teachers must acquaint young people with the fundamental facts of heredity. They must also inform themselves as to what these facts are. Especially must the sources of life be kept pure and sweet. A sound education in matters of sex is indispensable, the emphasis being laid on the use to the race of this most important of the physical functions. We do not so much need a course in sexology and heredity as we need personal words on appropriate occasions from fathers and male teachers to the boys and from mothers and female teachers to the girls.

The school and the home can teach the value of heredity to those who are to make the future. Heredity and the mighty influence it exerts in the making of men and women can be controlled by instructing the new generation in the right choice of life partners. A man or woman with a weakened and diseased constitution ought not to marry. Love alone is not a sufficient foundation for the home, though no home is rightly founded without love; the health, endowments, and character of the one loved are equally to be considered. Anticipate in the children what you now see in their possible father or mother.

Good Birth.

When the conditions permit, marriage is a social duty, especially for the more gifted. The talent of this generation should be invested in the children of the next. Every child, unasked as to the origin of its being, has the right to be well born; its parents owe it health. A child is well born who comes of clean and sturdy stock, who has in the fibres of his being no hereditary taint of inebriety, scrofula, insanity, or other disease, and who begins his earthly existence with vitality and the promise of health. Parents should be neither too young to be themselves mature nor too old to be still vigorous, nor for any reason enfeebled. The child's first cry on entering this life is his natural response to the cold world in which his existence becomes independent; it is his inalienable right to be so well born that existence is to him a pleasure and not a painful struggle through life. The trouble is, parents think of these things too late; laying prudishness aside, these things should be definitely taught to young people by the appropriate persons. Girls

especially must be taught the sacred truth, which their own natural instincts confirm, that no personal career in life is comparable in value or satisfaction to being the mother of well-born, truly nurtured children.

Rational Sexual Selection.

Especially should heredity be controlled also by instructing the new generation in the right principles for selecting the home mate. "Sexual selection," as Darwin called it, works naturally and advantageously, but slowly, in the animals. It can never be made to work by legal prescription in man; this mistake Plato made in destroying the choice of mates in the "Republic." An enlightened individual judgment and a compelling public opinion are the true means for securing right selections among men and women. It is not too much to hope that rational selection can do for man in a shorter time what natural selection does for the animals in the longer time, that is, breed the better type. In the following quotations the best present wisdom in the guidance of marital selection is embodied: "The clear lesson of Mendelian studies to human society is this: that when two parents with the same defect marry — and there is none of us without some defect — all of the progeny must have the same defect, and there is no remedy for the defect by education, but only, at the most in a few cases, by a surgical operation. . . . The only rule, a very general one, that can be given at present is that a person should select as consort one who is strong in those desirable qualities in which he is himself weak, but may be weak where he is strong." [1]

[1] C. B. Davenport, "Influence of Heredity on Human Society," in "Race Improvement in the United States," Phila., 1909, pp. 19, 21.

"Race Suicide."

It is alarming to students of human progess like Francis Galton, Karl Pearson, President Eliot, President Roosevelt, that those members of society whose offspring would be most efficient are not reproducing their kind. The most fit are the least fertile. The primal mandate to the most highly endowed needs to be heard and obeyed again, "multiply and replenish the earth." Teachers and parents must help create a public sentiment in favor of children in the home. Our first Federal census was made in 1790, the next preceding the present one in 1900; during this period the American family has shrunk from an average of 5.8 persons to an average of 4.6. In the colonial days the number of children under sixteen years of age to each family was 2.8, as compared with 1.5 to-day. Of course it is true that the movement of the population from the country into the cites does not encourage the having of large families; babies are not welcome in "flats." But the decrease in the size of the family in America is not in itself so alarming; one might argue with some justice that the fewer the children the better the chance each one has. Such an argument has been made for France, where to every child under sixteen years there are 2.6 adults of self-supporting age. The main trouble is that the large families continue with the people on the whole least fit to multiply, and the small families are found most among those most fit.

Professor Karl Pearson has studied this question of "race suicide" among the British upper classes particularly. He says: "Our merchants declare that we are no longer strong enough to compete with the

Germans or the Americans. Our scientists, when they have seen what is going on in foreign lands, proclaim the glory of foreign universities and advocate the development of technical instruction. Our politicians, stricken with fear, demand heroic remedies.

"There is something at the bottom of all this; it is not simple literature, or the fantastic sociology of uncultivated people. There is a lack of men of superior intelligence; there is a lack of intelligence in the British merchant, workman, and professional man. There is poverty of great directing minds and of average dirigible minds. This must come from the fact that the superior breeds or families of the nation, intellectually, are not reproducing in sufficient quantity. It is the mediocre and inferior breeds that propagate like rabbits. The least fit are the most fertile. If this is the case, it will be vain to introduce better educational methods. They will not raise the hereditarily feeble intellect to the level of that which is hereditarily strong. Education cannot take the place of breed; it cannot put into the blood what has not been placed there by those who alone have the power to do so. It is therefore necessary that reproduction in the superior stocks should be more abundant than it is; otherwise the proportion of superior to inferior individuals will rapidly change in favor of the latter; the worthless elements will gain enormously on the valuable ones unless we find the means either to diminish the fertility of the former — which is impracticable — or to increase that of the latter, which is practicable, for it depends on themselves, their relative sterility being certainly voluntary."

These views of Pearson indicate the clear duty to their kind of those upon whom nature in her bounty has conferred the higher gifts. The Registrar-General of Births, Deaths, and Marriages in England and Wales shows in his seventieth report that, in the period 1876–80, the annual rate of increase by excess of births over deaths was 14.56 for 1000; in 1907, it had fallen to 11.27. Commenting upon this decrease he says: "There can be little doubt that much of it is due to deliberate restriction of child-bearing. The fact is also significant that at the last census period, 1900–02, the fertility of English wives was lower than that recorded in any European country except France."

These and other similar investigations into "race-suicide" and eugenics show at least these two things: that the more fit should become more fertile; and that heredity sets very definite limits to what education can accomplish, directly contravening, in fact, a widely accepted opinion which finds expression in the Japanese proverb: "Education is more than birth."

Segregation of the unfit.

Some persons are unfit to be parents; the offspring of such are doomed from the womb to belong to the deficient classes. Society is gradually coming to recognize that, if the race is to be bettered, indeed, if the race is to be protected, these people must be segregated. A nation of individualists, as America mostly is, does not relish such an extension of social authority. But thirty or more states have already taken action looking in this direction. Those persons unfit for parentage should be isolated in celibate industrial communities. The list includes the insane,

the idiotic, the feeble-minded, the epileptic, the congenitally deaf, the congenitally blind, the inebriate, the syphilitic, and the incurable drug fiends. Especially should the feeble-minded be segregated; in the case of women their weakness makes them easy victims of unbridled passion, their children are regularly half-witted; and the trouble we would avoid is spreading itself in geometrical ratio. In vain does society establish philanthropic institutions for the education of the deficient classes when it permits the feeders of such institutions freedom of social intercourse. Society is very slow in learning that a railing about the top of a precipice is better than a hospital at the bottom. Social prevention is more economical in money and in racial vitality, which is true wealth, than social cure. We have been content to prune off the branches of the tree of evil instead of digging it up by the roots.

Other Proposed Remedies.

It is estimated that two-fifths of one per cent of the population are feeble-minded and epileptic; that two per cent of the school population are so. The figures are not alarming in themselves, but we do not want them increasing by marriage. Segregation is not unkind to the afflicted individuals, and it is a mercy to the race. Other less satisfactory remedies have been proposed, such as more restrictive marriage laws, sterilization, or even death. Restrictive marriage laws will but lightly affect the unfit, tending rather through the denial of the marriage sanction to add illegitimacy to the imbecility of the offspring. Sterilization would be effective, but it disregards too much the springs of life, and reduces its objects to the

social disesteem of eunuchs. As for the death penalty for such misfortune, humanity would lose in its essential spirit of humaneness more than it gained in increased physical efficiency by such a return to the subhuman standard of murder that prevails in nature. On the whole, social detention is both effective and considerate.

Develop the Strong Points of Heredity.

Ought education to seek to develop the strongest or the weakest point in heredity? If we could count on the transmission of an acquired character, and were aiming at the elevation of the racial capacity, we should have to develop the weakest point, as supposedly it could be more easily improved upon than the strongest. But we are perplexed at present in our answer to this practical question because we do not know precisely the effect of training on heredity. So the question can be only tentatively answered and only in reference to the individual. In the gymnasium the body is brought to its best estate by developing the weak points up to the standard of the strong, that general harmony may ensue. The same plan is a pretty ideal in the school, especially if the school is regarded as the gymnasium of the mind. But the analogy does not hold very well in the case of mind. Where heredity has left us weak we are likely to remain weak, as, for example, in common sense, humor, or temperament, despite much effort. It therefore pays in the case of the individual to develop him most in the forte in which he is strongest; this will be his contribution to society. This method is attended with the risk of narrowness, eccentricity, and specialization, but it accomplishes highest indi-

vidual achievement and greatest social progress. The risk is to be run, minimized indeed by some attentive effort to the weak points, while the strongest points, however, are receiving the greatest emphasis. The notion of a well-balanced, all-around, harmoniously developed human mind is a fictitious ideal; we are strong in some points and weak in others; our general ability is really an average of varying abilities in different directions. As nature endows us this way, educational effort should be similarly proportioned, giving most time to the strongest points. A genius in a given line may actually be handicapped by being compelled to follow alien interests. Society has many men who can do the things we do poorly; we are fortunate if society has not many men who can do the things we do best. While the strong points are to be emphasized, the weak points are not to be neglected. And both strong and weak points may need stimuli to awaken them.

Arouse Dormant Heredity.

It is important to recognize with fair-mindedness that heredity is good as well as bad, that there is good in the worst of us as well as bad in the best of us, that it is one-sided to excuse evil-doing on the score of bad heredity without at the same time also condemning it on the score of good heredity. Also it is important to recognize that, though by heredity boys and girls are dull in some lines, they also by heredity are capable in other lines. We must arouse the dormant heredity, both the moral and the intellectual. There is something good in the worst child to which to appeal if we can but find it; there are some lines of capacity in the stupidest child if we can but dis-

cover them. In the search for the elements of good heredity we must utilize various stimuli, patiently trying many appeals, trusting that finally some one of them will strike the responsive chord in the child's inherited constitution.

Study the Individual Child,

The child to be reared and taught, though small, though but recently born, is as old as the race. Education cannot begin at the beginning; it must take account of a foundation that is already laid. The great claim of children upon their educators is that they be understood. Watch for the appearances of heredity. Treat with them. The child's nature is not a sheet of white paper to be written upon, nor a block of wood to be carved into any form, nor molten brass to be cast into any image, nor rough stuff to be built up in accord with an architect's plan; none of these time-honored images are reliable: the child's nature is a seed of life with an immanent design, perhaps a whole flower garden, weeds and all. To educate a child is to comprehend the plan of its soul and to assist this plan toward its full realization. Study to know, then, your individual child, and use your knowledge. No two souls are precisely alike, not even of twins. Least of all, then, is education the recasting of all souls in the same mould.

and the Parents,

It will help some in understanding individual children to know their parents. We usually feel that we are in closer touch with children after meeting their parents, and we are. Not that we can induce the child from the parents, for the mixture of them both is unique in him, and, after all, he goes back

behind them too in the matter of inheritance. But to understand parents sharpens our expectant attention.

and the Races of Men.

In the same way, but to a lesser degree, it will help us to study race characteristics. Then, knowing the race of the child, his little oddities and variations are more significant to us. And so we know better what to do next in guiding his development.

Recapitulation Theory.

Perhaps the chief claim to greatness of Ernst Haeckel as a biologist is his formulation and defence of the so-called "biogenetic law." It is his main argument for the evolution of man from lower organisms. This is the law in its technical form: "The evolution of the fœtus (or ontogenesis) is a condensed and abbreviated recapitulation of the evolution of the stem (or phylogenesis); and this recapitulation is the more complete in proportion as the original development (or palingenesis) is preserved by a constant heredity; on the other hand, it becomes less complete in proportion as a varying adaptation to new conditions increases the disturbing factors in the development (or cenogenesis)."

The heredity of the child according to this law is from all his ancestry, though the fraction becomes infinitesimal long before the animal ancestor of man is reached. The recapitulation theory holds that man in his physical and mental growth repeats the stages of the racial history. In a general way the formula is demonstrably correct. At a certain period in its prenatal development the human embryo shows the analogue of the gills of the fish. The love of chil-

dren for playing in water may be traceable to man's aquatic ancestry. This theory helps us to understand the animal instincts of children and to treat with them. But it is not necessary to conclude from it that we must let young children be savages before we can civilize them. For, in their cases, the racial development may be abridged, as the law itself allows, by a single lesson in manners and morals. And, further, the influence of a civilized social environment is constantly at work against the outcroppings of the animal nature. The recapitulation theory is a light, but not a guide.

Right Immigration.

In order to avoid developing latent weaknesses in a race, it must intermarry with other races. Inbreeding is good to fix prepotent qualities; cross-breeding is good to prevent inherent weaknesses coming out. To cross breeds between a stronger and weaker race is doubtless good for the weaker but bad for the stronger. For the weaker members of a given race to multiply breeds inferiority. These things mean two conclusions for the American people on the immigration question, so far as racial improvement here is concerned; viz., that inferior races who would intermarry with the native stock should be excluded from our shores; and that of all inferior races only the superior members who might intermarry with each other should be admitted. Physical, educational, and property tests are none too many to apply. The African slaves and immigration from the Orient and from southern Europe have injured our native stock; the immigration from northern Europe is beneficial. Immigrants are now flocking

to our shores at the rate of a million a year. They need to be both better selected before they come and better protected after their arrival.

Marriage Tests.

Persons who marry should be physically fit. There is no way of determining whether they are so without medical examination. Many right-minded persons voluntarily undergo such examination, out of respect for their possible mate and for their posterity. It is a safe precaution to encourage. Some states are requiring medical tests of all candidates for the marriage license. Such requirements once again emphasize the gradual extension of social right over personal liberty. In the interest of the race a person physically unfit has no right to marry. Theoretically marriage tests are correct; practically, they may make the marriage relation more attractive through forbidding it to the unfit, and so encourage illegitimacy. Such an outcome could be avoided only by a stronger individual sentiment than exists against "elective affinities" and cohabitation, and by social detention of the worst cases.

Woman's Rights.

The physically fit woman has no right not to marry under appropriate conditions. Most women intuitively recognize their duty to the race through the leading of nature. College women are most apt not to do so; a smaller percentage of these as a class marry, these marry later in life, and they have fewer children. The reasons are social as well as personal. A college woman is likely to be independent economically and she likes her freedom; in view of her years in school she is older when it is convenient to marry; she has ideas of her own and is more careful

in bestowing her affections; she does not find a poorly educated man congenial; having many interests already established, children are either unwelcome, or else must not be so numerous as to engage all her time; and society is continually offering her more opportunities to earn her own living. Recent economic and social changes are putting the woman forward. Under our present system of ideals of womanhood and of female education, these conditions must be regarded as logical and proper conclusions.

It is certainly too much to say, "In the United States the so-called higher education of girls has been proved in effect to sterilize them — and these the flower of the nation's girlhood, and therefore, the very elect for motherhood."[1] On the contrary, the college woman, being in the position she is, is probably doing as nearly her full duty to society as any social class. She does marry, she does bear children, she raises them well, and she is responsive to social needs.

In general, the American ideal, in contrast with the continental ideal of woman, is that she must be educated for herself and not for man, that she must be educated in subject-matter and method as a man is educated. Perhaps Bryn Mawr best typifies these conceptions.

Without entering into the complex and world-old question of woman's place in society and her appropriate education therefor, I simply record my view that woman should be educated both for herself and for man; that she should be educated for the pri-

[1] Saleeby, "Parenthood and Race Culture," p. 89.

vate rather than the public types of service, — for the home and school, rather than for the pulpit and bar; that her education should not be modelled after that of the man's college, but in matter and method should take account of woman's distinct nature and function in society; that domestic economy and training for motherhood are essential in her education; that these views are in accord with the obvious intent of nature and so will in the end prevail; that when they do prevail, the college woman, trained for society, teaching, home, and motherhood, will be the main reliance of the race for self-improvement; that this service, though disguised below masculine occupations in some cases, really constitutes the highest happiness of woman.

But college-bred or not, a woman who is to marry has certain rights. She has the right to refuse an unwelcome proffer of marriage; she has the right, whether she cares to exercise it or no, to choose as well as wait to be chosen; and when married, she has the right to select the periods of gestation. Where woman is properly regarded by man, in society and the home, her rights will take care of themselves.

Outdoor Life for Women.

It is unfortunate that "to be feminine" and "to be weak" have been almost synonyms for so long a time. It is not necessarily so. In primitive societies the woman is the outdoor worker and is strong. The Orient shut her up in a harem. Even the Greeks kept her at home. The Roman matron likewise was a home body. Mediævalism enclosed her in convents or chivalry assigned her those delicate qualities still considered feminine. The Renaissance ought to have brought woman out into the open air, but it did

not. Modern "society" still keeps her in vitiated and artificial atmospheres. But the outdoor era is dawning. Biology has taught both men and women to regard physical vigor with favor. The physical emancipation of woman is a part of her general modern emancipation. Outdoor games and sports distinguish the strong from the weak. According to present preferences, and fortunately for the new generation, the strong, vigorous woman is at a premium. Physical training and gymnastics in the schools have helped. Even fashion has played a beneficial part in getting women out of doors. Exercises in which they now freely participate include golf, tennis, swimming, motoring, horseback riding, rowing, and basketball. These things have increased both beauty and health. They have not made women as strong as men, but they have made them stronger. In the race for strength woman as a class has one decided advantage, freedom from the habit of smoking. It is to be hoped their new-found freedom will not lead women to contract this habit, signs of which, however, have appeared. Smoking is indeed not so much a racial as an individual enemy, weakening appetite, hindering growth, and, withal, being an economic extravagance.

Prenatal Influence.

For the good both of mother and child the conditions of gestation should be comfortable, agreeable, and free from anxiety. Either no conception should have occurred, or else the little visitor from the beginning should be welcome. Before birth the physical life of the child is one with that of the mother through the placental connection. Since the mind influences the body, both the mind and body of the

mother should be free from strain and sudden fright. The influence certainly extends to the body of the child, and so conditions in a general way his mental efficiency. Cases are dubious, however, of the physical markings of the child from the mother's frightful experiences. Her general mental condition, through influencing her body, influences the child's body and so in a general way his mental strength. But it is idle to suppose that the mother by wishing it can endow her child with qualities, musical, oratorical, etc., he does not inherit. During the prenatal period the life of the mother should go on very much as usual, with a few modifications. Under healthy conditions there is only a minimum of risk and discomfort. The things to be avoided are overexertion, sudden efforts, unhygienic acts of whatsoever kind, tight or insufficient clothing, too little or too rich food, indulgence of craving for indigestible articles of diet, the use of alcohol, coffee, and tea, and too much indoor life. A normal amount of activity about the house and walking in the open air are beneficial. It would be well if all mothers could hear the voice of the annunciating angel with religious joy.

Universal Peace.

The peace of a nation improves its stock. War appeals to the spirit of patriotism and to manly courage. College men especially heard its call in our Civil War. Frederick the Great and Napoleon preferred the tall soldier. War selects the physically and morally fit and leaves them upon the battlefield. The wars of Rome, though usually successful, left the city in the control of a mob. It is claimed that Napoleon reduced the stature of the French people. The

army is a serious drain upon the vital energies of the nations with great standing armies. War leaves the least fit men behind to repopulate the country. Peace is a condition of race improvement. One condition favoring universal peace is a universal speech, leading to better comprehension, to more sympathy, to the establishment of a universal republic of letters.

Is Philanthropy Misguided?

It is true that rational selection often interferes with the action of natural selection. Civilization is characterized by insanity, bad eyes, poor teeth, indigestion, etc. The oculists make unfit eyes to suffer no disadvantage in social competition, the dentists preserve unfit teeth and the next generation has teeth still less fit. Society by philanthropy seeks to make the unfit fit. Weak animals fall out of the race, but weak men have their burdens borne for them. The hungry are fed, the poor are clothed, the outcast is given another chance, the fatally sick are kept alive, the illiterate are educated. Philanthropy does for unsuccessful adults what nature in the animal kingdom does only for the young. Would we be better off to imitate nature more? Is our philanthropy misguided? So think Spencer, Nietzsche, and Bernard Shaw. Thoreau says, "Still we live meanly, like ants; though the fable tells us we were long ago changed into men; like pygmies we fight with cranes; it is error upon error, and clout upon clout, and our best virtue has for its occasion a superfluous and evitable wretchedness."

The veteran founder of eugenics has written in his last work:

"It is known that a considerable part of the huge stream of British charity furthers by indirect and un-

suspected ways the production of the unfit. It is most desirable that the money and other forms of attention bestowed on harmful forms of charity should be diverted to the production and well-being of the fit. For clearness of explanation, we may divide the newly married couples into three classes, with respect to the probable civic worth of the offspring. There would be a small class of "desirables," a large class of "passables," of whom nothing more need be said here, and a small class of "undesirables." It would clearly be advantageous to the country if social and moral support, as well as timely, material help, were extended to the desirables and not monopolized as it is now apt to be by the "undesirables." [1]

But while philanthropy, in so far as it is devoted to the unfit, does weaken the race, it also brings a most valuable compensating feature in its sympathy and sense of humanity. On the whole the gain by philanthropy is greater than the loss. The note of humanity is worth all it costs the race. With it are bound up the finer social feelings which one day will make the world at peace; meanwhile philanthropy is learning to benefit the unfit individual at the same time that it prevents him from propagating his kind to injure the race. If the sense of humanity gave way before the process of natural selection, it would reinstate the war of all against all, the doctrine of might is right, and the physical would usurp the place of the moral. Meantime it is important to remember that natural selection brought about just that rise of intellect which to-day favors philanthropy among men.

[1] Francis Galton, "Memories of My Life," N. Y. 1908.

The First Principle of Man-making.

These and other practical methods that will occur to the reflective reader are our dependence for applying our knowledge of heredity in raising the level of human capacity. An old Scotch lady came late to service. "What, is the sermon done?" she inquired of the sexton at the door. He replied, "It is said, Madam, not done." Or, as Benjamin Franklin puts it in his discourse on "The Way to Wealth": "Thus the old gentleman ended his harangue. The people heard it and approved the doctrine, and immediately practised the contrary, just as if it had been a common sermon." But we are learning with Franklin how true it is of nations and societies, as well as of individuals, "that, if you will not hear reason she'll rap your knuckles." Meanwhile it is something to know as a guide to possible conduct that the first of the first principles in the making of men and women is that of eugenics; *reduce the multiplication of the unfit and increase the multiplication of the fit.*

7. The Abuse of the Law of Heredity.

Though great, passing great, the influence of heredity in the making of men and women, still it is possible to abuse this law. We abuse the law of heredity, by overstating the case, when we say, without qualification, "Men are born, not made." Strong and true as it otherwise is, the following statement of a student of the Mendelian principles of heredity errs by omission. Punnet writes:

"Speaking broadly, our present policy aims at raising the standard of the less fit; at attempting to bring them closer by such means to those who are richer in natural endowment. Has such a line of endeavor any

hope of permanent success? Or is it based upon a misconception of the nature of living things? Some there are, doubtless, already, who question whether the general policy pursued with regard to the lowest classes of the nation is a sound policy; who are troubled with the suspicion that Hygiene and Education are fleeting palliatives at best, which, in postponing, but augment the difficulties they profess to solve. To them the facts of heredity may speak with no uncertain voice. Education is to man what manure is to the pea. The educated are in themselves the better for it, but their experience will alter not one jot the irrevocable nature of their offspring. Permanent progress is a question of breeding rather than of pedagogics; a matter of gametes [germ cells], not of training. As our knowledge of heredity clears, and the mists of superstition are dispelled, there grows upon us with ever increasing and relentless force the conviction that the creature is not made but born."[1]

The creature is born in part, he is made in part, and in part he makes himself, especially in the case of man. Heredity alone is insufficient to explain man. Even the poet is made as well as born; so also the surgeon, the doctor, the teacher, the lawyer, the minister, the mother, the merchant. Given a good environment, hardly ten per cent of the populace, if so much, would prove to be born irremediably unfit. Life's failures are in most instances traceable to the heaven of infancy being spoiled by the hell of environment. As George Macdonald writes in "Baby":

[1] R. C. Punnett, "Mendelism," Cambridge, 1905, pp. 80–81.

"Where did you get that little tear?
I found it waiting when I got here."

Through the non-inheritance of acquired characters each new generation is given practically a fresh start, which it would have entirely but for the racial poisons and the effects of long use and disuse. Two children of the same hereditary endowment, if such were possible, would under different circumstances result in different persons.

The use of heredity alone in explaining men has been called "the grandfather" theory, in allusion doubtless to the famous witticism of Dr. Holmes. But as a certain New England educator once dryly remarked, it is difficult to explain the difference between the brothers Cain and Abel on the grandfather theory.

Another illustration of the abuse of the law of heredity is the proverb coined by the children of Israel in captivity to explain their national calamity: "The fathers have eaten sour grapes and the children's teeth are set on edge." A great prophet of individualism, Ezekiel, arose to dispel such fatalism with the principle: "The son shall not die for the father's sin; the soul that sinneth it shall die."

We abuse the law of heredity when we assert it is the only law at work in the making of a man; when we say, if a child is born wrong, all is wrong, if well, all is well; when we are unduly depressed by a bad heredity, or made unduly confident by a good heredity. We must not forget the "sports" with which nature provides us; they are the remarkable variations from their ancestry. So a good nature may

come out of what seemed unpromising heredity, and a bad nature may come out of what seemed a promising heredity. A very slight bruise from the environment may notably affect the growth of a living organism. The Alpha of man-making is heredity, but there is also an Omega. The laws of environment and will work in conjunction with the law of heredity.

In order, therefore, to free ourselves from the overwhelming sense of the weight of heredity resting upon us from out the irrevocable past, and in order to see the processes of education and man-making in their integrity, it is necessary at this point to turn to the discussion of the other elements that go into the production of our complex human nature.

REFERENCES ON CHAPTER II

Allen, W. H., Civics and Health, N. Y., 1909.

Allin, Arthur, "Social Recapitulation," *Ed. Rev.*, Vol. XVIII, pp. 344–352.

Baldwin, J. M., Social and Ethical Interpretations, Chap. II, N. Y., 1906.

Ball, W. P., Are the Effects of Use and Disuse Inherited? N. Y., 1891.

Bateson, W., Materials for the Study of Variation, London, 1894.

—— Mendel's Principles of Heredity, Cambridge, 1909.

Björkman, "What Health is Worth to Us," *World's Work*, March, 1909.

Brewster, "Breeding Plants and Animals to Order," *World's Work*, December, 1907.

Brooks, W. K., Law of Heredity, Baltimore, 1883.

—— Foundations of Zoölogy, N. Y., 1899.

Carver, T. M., Sociology and Social Progress, Boston, 1905, Selection XXV (Galton).
Cope, E. D., Primary Factors of Organic Evolution, Chicago, 1896.
Darwin, Charles, Origin of Species, N. Y., 1859.
—— Variation of Plants and Animals under Domestication, N. Y., 1868.
—— Descent of Man, N. Y., 1871.
Davenport, C. B., Eugenics, N. Y., 1910.
Dock, L. L., Hygiene and Morality, N. Y., 1910.
Dugdale, R. L., The Jukes, N. Y., 1888.
Eigenmann, C. H., "The Physical Basis of Heredity," *Pop. Sc. Mo.*, Vol. LXI, pp. 32–44.
Eimer, G. H. T., Organic Evolution, London, 1890.
Ewart, J. C., The Penicuik Experiments, London, 1899.
—— "The Experimental Study of Variation," *Nature*, Vol. LXIV, pp. 482–488.
Forel, A., The Sexual Question, 1908.
Galton, Francis, Hereditary Genius, London, 1892.
—— English Men of Science, London, 1874.
—— Inquiries into Human Faculty, N. Y., 1883.
—— Natural Inheritance, London, 1889.
—— "A Diagram of Heredity," *Nature*, Vol. LVII, 1898, p. 293.
—— Memories of My Life, N. Y., 1909.
Geddes and Thomson, The Evolution of Sex, 4th Ed., London, 1901.
Guyau, M. J., Heredity and Education, 1891.
Hayward, F. H., Education and the Heredity Spectre, London, 1908.
Jordan and Kellogg, Evolution and Animal Life, Chaps. X–XI, N. Y., 1907.
Jordan, D. S., The Blood of the Nation, Boston, 1903.
M'Kim, W. D., Heredity and Human Progress, N. Y., 1900.
Munro, M. F., "Three Years in the Life of a Child," *Ed. Rev.*, Vol. XVI, pp. 367–377.
Morgan, C. L., Habit and Instinct, London, 1896.
—— Animal Behavior, London, 1900.

Nisbet, J. F., Marriage and Heredity, 1889.
Oppenheim, The Development of the Child, Chap. IV, N. Y., 1898.
Pearl, R., "Eugenics," *World's Work*, January, 1908.
Pearson, K., The Grammar of Science, 2d Ed., London, 1900.
Punnett, R. C., "Applied Heredity," *Harpers*, December, 1908.
—— Mendelism, Cambridge, 1905.
Ribot, Th., Heredity, London, 1875.
Romanes, G. J., Darwin and After Darwin, Chicago, 1895.
Saleeby, C. W., Parenthood and Race Culture, N. Y., 1909.
[Several Authors], Race Improvement in the United States, (Am. Acad. Pol. and Soc. Sc.), Philadelphia, 1909.
Spencer, H., Principles of Biology, London, 1864–1867.
Thomson, J. A., "History and Theory of Heredity," Proc. Roy. Soc., Edinburgh, 1888–1889.
—— Science of Life, Chicago, 1899.
—— Heredity, N. Y., 1905.
Thorndike, E. L., Heredity, Correlation, and Sex Differences, N. Y., 1903
—— Educational Psychology, Chaps. IV–V, 2d Ed., New York, 1910.
Wallace, A. R., Darwinism, Chap. XIV, N. Y., 1890.
de Vries, H., Plant Breeding, Chicago, 1907.
—— The Mutation Theory, Chicago, 1910.
Weismann, A., Essays on Heredity, Oxford, 1891–2.
—— The Germ-Plasm, London, 1893.
—— On Germinal Selection, 1896.
Wilson, E. B., The Cell, 2d Ed., N. Y., 1900.

CHAPTER III

ENVIRONMENT AND EDUCATION

Outline of this Chapter.

At the beginning of our discussion of this second element in man-making let us note in advance the main points to engage our attention. First, we want to know the nature of environment; then its general influence; then the influence of the physical environment; then the influence of the social environment; then certain personal variations from the average of the social environment; then the practical bearings of the discussion; followed finally by an account of the abuse of the law of environment. These successive steps in the argument will be made clear to us as we proceed.

1. The Nature of Environment.

The Meaning of the Term "Environment."

By the much-used term "environment," we mean the natural circumstances under which an organism develops. And these circumstances contribute something to the character of the organism, so much, indeed, that the influence of environment is one of the elemental forces in the growth of an organism. The environment is the stage and the scenery of the drama of evolution. It is possible to consider the lower types of organisms as all but sufficiently explained by reference to their heredity and environment. These two influences in relation to the organism are like the parallelogram of forces which

physics describes; the movement of the body is explicable in terms of these forces. Even when consciousness is sufficiently developed in the scale of animal ascent to have its presence remarked, as in the earthworm, still the theory of "determination" in biology would say that the later evolving forms are still explicable in terms of heredity and environment, without reference to any consciousness that may be present. Many biologists to-day, however, notably Baldwin and Conn, are recognizing the presence and the usefulness of consciousness in organic evolution, especially of the higher forms. When the theory of evolution comes to be finally written, it will be a psycho-physical theory. The fact itself of the nature and influence of consciousness must concern us later in the discussion of the contribution of individual effort to the making of the race. Meanwhile it is enough for us to note that the term environment means the surroundings of a developing organism.

The Kinds of Environment.

There are two kinds of environment that influence living organisms; viz., the physical, sometimes called the socionomic, and the social. Plants and animals are more subject to the physical than to the social environment; perhaps man is quite as much subject to his living social environment as to his physical.

Physical.

The physical environment includes such elements as soil, air, light, heat, climate, water, food, salinity, electricity, gravity, scenery, and even the body, as environing the germ cells. The references on environment at the end of this chapter discuss in detail for those interested the specific effects of each of these

environing physical elements. In a general way we know from observation the influences upon life of these physical agents and find ourselves sympathizing with the early Greek philosophers who said earth, air, fire, and water were the four elements of all things.

Social.

The social environment, responsible for "social heredity," influences those animals actuated by the group impulse, including man. It includes all forms of association, the use of language, the expression of the emotions in the crowd, habits, customs, conventions, fads, fashions, and moral standards. The greatest element in the social environment of man, not appearing among the animals, is ideas, public opinion. Men adjust themselves to the ideas of other men, to what society on the whole approves. Public opinion is the main reliance of social progress. It is subject to rapid change with correspondingly rapid social improvement. Public opinion may come to condemn the methods of nature, which preserve the race, and favor the methods of philanthropy, which preserve the individual. Its scope is greatest in a democratic form of government. Education, too, is made possible by the social environment; educating, in fact, is purposely directing social heredity for the benefit of the young. John Stuart Mill illustrates this point of view in defining education as "the culture which each generation purposely gives to those who are to be its successors, in order to qualify them for at least keeping up, and, if possible, for raising, the level of improvement which has been attained."

It is possible to analyze the complex social environ-

ment into its elements, and some sociologists have done so.[1] For our present purpose it is sufficient to consider the social environment in its unity as contrasting with the physical environment.

2. The General Influence of Environment.

Having now seen the nature and kinds of environment, we must next inquire concerning its influence. The influence of environment may be stated in the form of a law, which is one of the fundamental laws in biology, viz., "*The living organism must be adapted to its environment.*"[2] The famous definition of life given by Herbert Spencer conveys the same idea: "Life is the continuous adjustment of internal relations to external relations." This process of adaptation means that the environment modifies the organism, that the organism in turn modifies to some extent the environment, resulting in the outcome that the organism often becomes physically and socially like its environment.

The Law of Environment.

The Environment Modifies the Organism.

The environment modifies the organism from its conception till its death. As evolution advances the organisms become more differentiated, in order to adjust themselves better to their complex environment. In the simplest organism all the cells are alike; they are homogeneous. In more complex organisms; the cells become differentiated from each other in function, the outside cells serve for protection and food capture, the inside cells for digestion; the cells become heterogeneous. Yet the unity of the organism is not impaired; there is still integration.

[1] Cf., for example, L. F. Ward, "Applied Sociology," Boston, 1906.
[2] Sedgwick and Wilson, "Biology," p. 103 (italics theirs).

This procedure from the homogeneous through the differentiated to the integrated characterizes all organic development and is conditioned by the multiform environment in adjustment to which survival becomes possible. Specific examples of the modification of the organism by the environment may be given. "Slight changes in conditions, such as turning an embyro over, putting it in a new medium, subjecting it to a different temperature, or supplying it with food differing in kind and amount from the normal, greatly modify its development." [1] There is in fact just one life through all plants, animals, and men; it is the life of the primordial protoplasm, the life of the cell; all the varieties of individuals and species of all living things have sprung from the union of parental cells on the one hand and the influences of environment on the other.

The Organism Modifies the Environment.

The organism modifies its environment, as when a plant takes in carbon dioxide from the air and gives forth oxygen, as when a crab selects its home and digs its bed, as when a bird constructs its nest, as when a man disfigures the face of nature with factory smoke. These things again anticipate the part the individual plays.

The Organism becomes like the Environment.

As a part of the process of adaptation, the environment influencing the organism and the organism reinfluencing the environment, it eventuates that the organism becomes physically and socially like its environment. This result is particularly obvious among the lower animals. The birds grow feathers similar in color to their natural habitat; when they are quiet, such coloration protects them from their enemies.

[1] Kirkpatrick, "Fundamentals of Child Study," p. 294.

The fur-bearing animals are likewise colored similarly to their environment; some, like the rabbits, changing from brown to white and from white to brown with the coming and the going of the snow. This principle of resemblance in appearance to the native environment, which serves to shield the creature from its preying enemies, is known in biology as "protective mimicry." It is very easy to overdo this principle as an explanation; in each case it is necessary to know that the organism supposed to show "protective mimicry" does really occur in the environment to which it is similar, that its enemy is really deceived or warned by its appearance, and that the resemblance is actual, having been brought about, not by coincidence, but by the elimination of the creatures not possessing it. Many butterflies, for example, when stationary are almost indistinguishable from the flowers or leaves about them.

Illustrations.

Illustrations of the law of environment will occur to the observant upon reflection. The roots of the plant adjust it to the soil, its leaves to the air. Through the mechanical influence of heat, plants turn to the light—"phototropism." In cold climates, desert regions, places of scant food, and high altitudes, the growth is stunted. The water animal has gills and the land animal lungs. Kansas wheat in California loses some of its gluten. Hot and cold climates make the skin of man dark and light respectively. The eye of man is adapted to ether vibrations, his ear to air vibrations, his skin is sensitive to contact, pain, pressure, and temperature, etc. Thus the structures of an organism are usually, not always, adapta-

tions to environment; some structures are survivals of old adaptations, as the muscles with which some people can move the ears. The very fact of the great complexity of environment permits life to be more multiform, the creatures fitting into each other's waste places.

The Explanation of the Law.

It is thoroughly natural that animals should end by resembling their environment. Those that varied conspicuously from their environment were easily detected by their enemies, and were killed off, and their posterity with them. Those, however, that by fortunate variation more closely resembled their environment escaped their enemies, and their favorable characteristics were transmitted to their offspring. This is a very crude and simplified form of stating the method by which resemblance to environment came about through the struggle for existence and the survival of the fit, the so-called principle of "natural selection." Similarity to environment is one condition of survival. One may naturally object that such an explanation is only relative and mechanical, not absolute and teleological. This objection will receive consideration in the final chapter of our discussion, where the philosophy of these processes described by science will be suggested.

Environment provides Opportunity.

The greatest thing that environment can do for any organism is to provide it opportunity. The adaptations to environment show what the inherent capacities were. To provide opportunity for capacity is the prime function of environment. What a soul once born most needs is just opportunity. The grain of wheat has life in itself, but soil and sun-

shine, the dew and the rain, are its opportune environment. So the soul has life in itself, but the home and school, the church and society, are its opportunities. The environment must invest the capital that heredity has bestowed; without investment, the capital cannot grow; without the capital, investment is impossible. In the home and the school parents and teachers provide those opportunities that inherited capacities must have for their realization.

3. The Influence of the Physical Environment.

Having now seen the general influence of environment, we must next inquire concerning the specific influences of the physical and social environment. And first the physical.

Calls out Latent Heredity.

The physical environment calls out the latent heredity. It leads to the development of inherited qualities through use. Thus the botanist Nägeli took small Alpine plants to Munich; they grew large; their descendants taken back to the Alps grew small again. If the descendants had remained large in the Alps, it would have been the keeping of a developed power which had been latent rather than the inbreeding of a new power. Two people with the same complex heredity (if such were possible) under different environments would become different, because different inherent elements would be brought to the fore.

Leads to Atrophy through Disuse.

Reversely, the physical environment represses certain functions through giving them no opportunity to act. Through such disuse the function atrophies. The horses living for years underground in the dark Treadwell mines in Alaska go blind. Similarly, the

burrowing mole loses his sight, and the unused muscle shrinks in size.

Selects, not Produces.

Thus the function of environment is rather a selective than a productive one. Lamarck assumed that the influence of the environment was capable of changing the characters of the organism, thus fitting them to their life conditions; but the fact seems rather to be that changes in physical conditions may vary the degree of the quality, but not the quality itself. The environment does not produce qualities, but provides opportunity for qualities to show themselves. The origin of an organism and its characters is due to heredity; the survival of an organism, the prominence of certain qualities, the repression of others, is due to environment. Not the existence of plants and animals, but their well-defined distribution over land and sea is due to environment. True, if we go back far enough, we find the very appearance of cell-life conditioned by an environment that permits life to survive. The following passage from De Vries will illustrate the general principle that environment selects, but does not produce, as applied to desert plants. "They [desert plants] all prefer more favorable conditions to those which are given them. They endure the desert, but only with difficulty. Their life is nearer starvation than enjoyment. They are multiplying themselves in a prodigious manner, not, however, from luxuriance, but on account of the absence of competition. They do not thrive, nor do they unfold their full stature and qualities as they might under better conditions. They greatly prefer irrigated grounds or the moist air of the forest, and

only here display their real nature. Even cacti are originally forest plants, and may be seen stoutly growing between densely thronging shrubs. Thus the conviction is forced upon us, that desert plants are not, as a rule, the product of aridity."[1]

Exerts Pressure leading to Selection.

The physical environment exerts constant pressure upon living organisms. It is probably true that a stable equilibrium between organism and environment is never attained. Progress is through antagonism. There is discord with the environment. Severe cold, for example, kills off many weak animals, others it drives into hibernation, still others into growing adequate covering, still others into migration, and man it leads to the exercise of Promethean genius in the discovery of fire. The discord with the social environment is also a potent factor, as we shall presently see. It is the pressure of environment that selects the most fit.

Effects of Nutrition.

We might study with profit the specific effects of each one of the enumerated elements of the physical environment. For purposes of illustration, take the effects of nutrition. Queen bees are the result of much feeding; the workers are underfed. If the embryos are richly fed, ninety per cent of frogs' eggs may develop into females. Well-fed and healthy individuals develop the most potent germ cells. Starvation, disease, and hardship during the prenatal period will affect the offspring. Physical strain with poor nourishment of the young means puny growth and weak maturity. Anticipating the influence of will, many people have found by experiment that

[1] De Vries, "Plant Breeding," p. 350.

Mr. Horace Fletcher is right in saying human efficiency is improved when less food is taken, when it is better chewed, when we stop with the satisfaction of appetite, and when the "fear-thoughts" are eliminated.

Helps to explain Variation.

Physical environment helps to explain variation. One source of variation, as we have seen, is the fact that in higher forms where variation is greatest it takes two parents to produce one offspring; this is heredity. The other source is a change in the physical conditions about the organism. This leads the organism to seek to survive under the changed conditions; this leads some parts of the organism to function more, others to function less; this leads to change in the parts. Thus changes in the depth of water have affected aquatic animals through the changes in hydrostatic pressure and the amount of light received. In deepest sea-water the fish becomes tiny, the body is hard, and a special light apparatus is developed. The fresh-water fish differs from the salt-water fish, and in the Great Salt Lake, nine times saltier than the sea, only a small shrimp survives. Darwin says, "I am strongly inclined to suspect that the most frequent cause of variability may be attributed to the male and female reproductive elements having been affected prior to the act of conception."

Geography and Man.

The full understanding of man involves the geographical relation. In a truly wonderful way the earth permits man to live. The configuration of its surface, its thin layer of atmosphere, like a ribbon in universal space, its seas and land, its soils and climates, its days and nights, its rhythmic seasons, just

allow such plants, animals, and human beings as we know to arise and flourish. Small wonder that some sociologists have made the leap and declared that geography makes the man. Similarly Mr. Percival Lowell describes the physical, intellectual, and moral characteristics of the hypothetical dwellers upon Mars from the geography of that planet. The history of Europe is indeed divided by the Alps; the imagination of Greece is indeed one with its mountains, sky, and sea; the commercial success of America is indeed conditioned by its navigable rivers and its rich resources. But the geography still remains, though "the glory that was Greece" is no more. It is correct to say that geography helps to make the man. And the teaching of history demands the geographical setting. The passive East Indian and the stirring European came from the same Indo-European stock; the difference can hardly be explained without reference to the enervating climate of India. The use of geography in explaining racial differences appears in the following quotation, which perhaps, however, does not take sufficient account of heredity: "The contrast between the narrow, intense, bigoted Jews of New Testament times, and the fickle, self-indulgent, generous Samaritans is explained when we compare the rocky, unproductive, sombre hills of Judea with the open, rolling, richly fruitful fields of Samaria."[1] In explaining national characteristics, account must be taken of the social environment and of heredity as well as of physical environment.

[1] C. F. Kent, "The Use of Geography in Religious Instruction," in "Principles of Religious Education," N. Y., 1901, p. 218.

4. The Influence of the Social Environment.

When we contrast the action of nature and of man, interesting results appear. "Nature," says Professor Metcalf, "is socialistic, not individualistic, in the processes of evolution."[1] This means nature preserves the type, not the individual. Man, on the other hand, by philanthropy, works for the individual rather than for the race, though the newer forms of philanthropy, such as inebriate colonies, contemplate the race as well as the individual. It is also true that nature's socialistic methods, preserving the strong for the sake of the race at the expense of the weak, make individuals selfish, each one fighting for survival; while man's individualistic methods, caring for the unfit, make society unselfish, since the strong come to bear the burdens of the weak. The general influence of the physical environment is to cultivate intense selfishness in the interest of a strong surviving race; the general influence of the social environment is to cultivate sympathetic unselfishness in the interest of a surviving individual. Nature is rough and far-sighted; man is tender and near-sighted. The two working together provide that antagonism whose finest fruit is human character.

The Physical *vs.* the Social Environment.

The General Influences of the Social Environment.

The specific influences of the social environment are summed up in the comprehensive terms, competition, imitation, suggestion, and instruction. Even plants show the effects of competition in dwelling with other plants of the same or another species. Animals show at least the influences of competition and imitation in association with other animals. Man shows all the influences in maximum degree. We will briefly discuss each of these influences.

[1] Metcalf, "Organic Evolution," p. 187.

Competition. Competition is struggle between the individual and the social environment. It is one of the laws of life. This discord with the social environment most resembles the pressure of the physical environment. Among plants crowding prevents growth. Among animals and men there is rivalry between individuals to secure food, to possess the female, to win success. The result is that the fighting qualities come out, the others fall back. There is universal war in the animal kingdom. Hobbes thought he found the same among primitive societies of men. In gregarious communities members of the same species compete with each other for place and food. The progeny of one pair of parents likewise exhibit instinctive jealousy. The phenomena of social opposition lead to the development of greater individuality, and to greater achievement, especially in the fields of investigation and invention. Imagination and competition do more than necessity as the mother of discoveries and inventions. This matter of competition is stimulated by the environment, but it is also a phenomenon of will as well. It is to be noted that competition is between members of the same species as well as between species.

Imitation. Imitation is doing as another does. It presupposes the presence of enough consciousness to note the action of others, and it obviously tends to bring the individual into conformity with his social environment. To imitate is instinctive, the presence in consciousness of another's deed being a sufficient stimulus to start the imitative reflex, unless there is inhibition somewhere. Such instinctive imitation goes on without intention, as when we drop into the manners of

expression of a new community without realizing it. There may be also intentional imitation, as when we consciously follow the fashions of society in dress. We are comfortable so long as we conform to the social environment constituted by our group, and we become uncomfortable when unlike in any noticeable way the fashions prevailing in our set. Imitation works reciprocally, society influencing the individual, and the individual, if he be in any way notable, also influencing society. Imitation also works with both bad and good models. Plutarch observes, "It is a true proverb that if you live with a lame man you will learn to limp." One of the Hindu wise sayings is: "What man is there whom contact with a great soul will not exalt? A drop of water upon the petal of a lotus glistens with the splendors of a pearl." The instinct of imitation is one of the means by which the influence of environment brings us into conformity with itself.

Suggestion.

Suggestion is doing as another says. In auto-suggestion the individual plays both rôles. Our social environment calls upon us not simply to imitate its copies, but also to follow out its ideas. Ideas have an inherent impulsive power. Were there but one idea in consciousness, we should invariably act upon it, as hypnotic subjects do. The presence of several ideas in consciousness at once introduces mutual inhibitions. Suggestion rightly handled is a powerful influence in shaping character. According to a Bengali proverb, "Blackness leaves the coal when the fire enters." Would you create the reading and study habit among people? Then you must have an attractive library,

both in exterior appearance and in interior equipment, to impress the idea. Would you cultivate the better social habits among men? Then you must have an attractive meeting-place, with the amusements that interest without degrading. Would you develop the sense of religious reverence among young people? Then you must have chapels and churches whose interior atmospheres suggest the divine presence. And so on with all the great environing institutions of man. Put into the environment of the young what you want their souls to incorporate, and the laws of survival, of imitation, and of the power of impression will effect such incorporation.

Crime is due to social, quite as truly as to physical, heredity. In the case of the Jukes family the descendants were isolated from a proper social environment, and imitated each other. The children of one couple that moved out of the Jukes influence grew up much as others. "The records of charitable societies show that about eighty-five per cent of the children of paupers and criminals who are placed in good homes at an early age become good citizens."[1] We are a part of the good as well as of the bad we meet. Thomson asks, "Are we not apt to underrate the plasticity of human nature and the ready repressibility of hereditary items?"[2] The unclean environment can hardly produce the clean thing. Evil companionships corrupt good manners, and good companionships shame ill manners. The laws of environment hold, independent of the moral quality.

[1] Kirkpatrick, "Fundamentals of Child Study," p. 299.
[2] Thomson, "Heredity," p. 531.

Instruction.

The influence of the social environment is consciously brought to bear in instruction. By instruction the lessons of the past are orally transmitted; by instruction new ideas are disengaged in society; by instruction elders and teachers definitely plan to bring the young generation into conformity with their social and spiritual environment. The advantages of instruction over the other social influences are that it is consciously directed and so may be systematically given with a view to reaching any chosen end. A large element of educational work is just this systematic and well-planned instruction, and the whole of education is a combination of such conscious tuition with the unconscious influences of association. The whole of the social environment, by assimilating us to itself, educates us in the broadest sense of the term.

Social Environment in the Home

The surpassing influence of the home is justly celebrated. The reason that the home is so influential is that in it social heredity reënforces physical heredity, each of them being tremendous forces. The very things that the parents have put into the blood of the child they themselves also are by example and instruction, as a rule. A child born of artistic parents grows up also in an artistic environment. A child born of stupid parents grows up also in an unstimulating environment. The natural respect of children for parents leads even the wrong deeds of parents to appear right to the children. As are the parents so do the children tend to become, in language, dress, manners, and morals. Language is not a birthright but an acquisition; it

comes from imitating the sounds we hear. There was a Chinese student in the University of California who was born of Americanized Chinese parents, and did not know the Chinese language. He decided to study Chinese, and seemed to find as much difficulty in learning it as did the American students. A sparrow raised with canaries will approximate their song. Dress is wholly conventional, passed on by imitation or "social heredity," and varying with stocks and climes. The manners of the child are those borrowed from or taught by the parents. And the morals likewise. How hardly shall the school improve upon the standards of the home! In the home both heredity and environment centre; it all but makes the man.

and in School

But the same forces of survival, imitation, and suggestion are at work in the school, tending to bring the pupils into conformity with the environmental standards. Pupils can remain in the school society only on condition of conforming to its standards. Teachers supply the constant models for imitation. And the school atmosphere is ever suggesting indifferent or uplifting ideas to the susceptible spirit of youth.

and in Community.

Similarly the social standards of the community at large influence the young generation. The example of a single person is multiplied many times in a community; thus community standards are far more compelling in influence than individual standards. Such emotions as patriotism, respect for the aged, love of pleasure, of social prominence, or of service, are reflections in individuals of the standards of the

social environment. G. Lowes Dickinson says in America we are educating our children intellectually while all the time they are growing up in unæsthetic surroundings. And these surroundings in which we live are all the while influencing us unconsciously. The atmosphere of material success also characterizes us as Americans, and our children grow like that they feed on.

5. Personal Variations in the Social Environment.

The Genius.

He is the rare man, even the genius, who can provide his own opportunities, who can select or make his own environment, who can do for himself what nature and society do for others. The genius may rise above his environment, but, even so, the law of conformity in order to survive is still at work, and he does so at the risk of envy from his fellows or even at the peril of his life. Socrates rose above the moral standards of Athens, and the patient Athenians, after enduring his ethical criticisms for a generation, finally caused him to drink the fatal hemlock. Jesus rose above the religious standards of his environment in Jerusalem, and those high in authority, unable to accept in their sacerdotalism the simplicity of his hill side gospel, caused him to be nailed to the cross. Bruno rose above the scientific standards of his environment, and the powerful church, unable to admit the discovery of any truth beyond its revealed and transmitted doctrines, caused him to be burned alive. Every other martyr, too, in the world's progress illustrates the action of the same law, that to survive in comfort we must conform to the standards of our environment. To conform is to follow

the line of least resistance, and is safe; to rise above is to invite opposition, and, at the worst, martyrdom.

The Outcast.

The law operates also on the lower as well as on the higher level. Those who rise above their environment are geniuses, and may become martyrs. Those who sink below their environment are the social outcasts. Our reformatories and jails exist for those who refuse to conform to environment on the lower side. These institutions are filled with inmates who would rank with the best in more primitive types of society. The criminal is the man with the standards of the savage in the company of the civilized. In the home the refusal to conform to its standards is followed by punishment; in the school such refusal is visited by punishment, or, *in extremis*, by separation from the school body; in society such refusal in the lighter cases brands one as odd, eccentric, of a lower social clique or caste, and in the extreme cases as an undesirable member of a free society.

The Average Person.

However it may be with the genius in providing his own environment for himself, perhaps even a future ideal one, the most of us will limit ourselves to that opportunity which our environment brings with it. By giving our capacities a chance, by setting bounds to the field of our endeavor, environment contributes its quota to man-making. The average person conforms to the prevailing standards of the social environment in which he moves.

6. The Practical Bearings of this Discussion.

But ought he to conform? With this question we enter the field of the practical bearings of this theoretical discussion of environment.

Our Duty to Environment.

The answer is not easy. He must follow his moral sense; in cases where the moral sense is not quick for any reason, the person will be content to conform; where it is quick enough to rebel at existing practices and to demand something better, a true man will not conform. The operation of the law of conformity to the customary standards of the environment in order to survive comfortably does not militate against the duty of every man to rise above those standards when he feels they are wrong. Our duty to environment is to follow it in so far as it is right, and to rise above it and seek in patient tolerance to change it when it is wrong. The only light to guide us in thus adjusting ourselves to the environment or in readjusting the environment to our higher selves is the personal moral sense. As Martin Luther said, in one of the emancipating moments of human history, refusing to conform, "It is neither safe nor advisable to do anything against conscience." The Jesuits, who organized to defend the existing order against encroachments, saw the issue clearly enough when they agreed to subject even conscience to the will of the superior, in the words: "There can be no obligation to sinful acts of greater or less importance, except when enjoined by the superior in the name of Jesus Christ." The assertion of individuality can go no higher than Luther, the subjection of individuality no lower than the Jesuits. That the Jesuit order came to be dissolved by the papal power that had first sanctioned it is the dialectic of history against the subjection of an enlightened conscience. Social progress, morally viewed, consists in following the liberator of con-

science, whether he revise an old practice or establish a new one; it consists in becoming, if need be, such a leader one's self. If one's cause be great enough, to do so may mean martyrdom in politics or religion, but the stone that the builders of one generation reject is likely to become the head of the corner in the next. The fathers stone the prophets, and the children erect expiating monuments. This is as true of Bruno as of Servetus.

The Problem of Handling Environment.

The problem of handling environment aright in the making of greater men and women is simple in theory but difficult in practice. The problem is to equip the environment of the young aright. You must put into the environment what you want in the child. The environment must be equipped to give health to the body, truth to the intellect, beauty to the feelings, goodness to the will, and God to the whole man; and this in home, school, and community alike. The ultimate of wisdom in the matter of environment is, as President King says, "Stay persistently in the presence of the best," or, as Professor Thomson suggests, provide eutopias in which to live. So to do is to fall in with the currents that bear the soul upward; to do otherwise is to sink by the action of the same laws of environment. All the social workers know how a good heredity avails little in a bad environment, and how a bad heredity lies dormant in a good environment. Jacob Riis estimates environment at nine-tenths. It is enough for us at present to recognize that environment is one of the indispensable elements in man-making, and that, in contrast with heredity, environment serves the individual as heredity serves the race.

Menaces to American Society.

It is always better in building character to emphasize the good rather than the bad, and to overcome the bad with the good. But it is also necessary to see the bad and understand it in order to fight it. It helps us to define our problem of handling the environment when we realize the evils in the environment. The Americans are becoming self-critical; this stage had to come in the development of a free people; it is one of the conditions of further progress in self-development. Some of the many evils that infest American society, or dangers that become evils when not avoided, about which the social reformers are talking, are: the rapid increase of wealth, the fast pace, the indulgence in display, the urbanization of population, — only about half the people still living in the country, — the growth of special privilege, the readiness to enact, coupled with the unreadiness to enforce, laws; mob-violence; a growing reliance upon militarism; the use of a public trust as a source of private gain, — "graft"; the divorce evil, one marriage in ten now being later annulled; the social evil, it being estimated now that half a million women in the country are victims of this vice of man; child-labor; alcoholism; tuberculosis; gambling; the waste of natural resources, and other similar things. The array is long enough and alarming enough. Some of these dangers to the state have belonged to every age of man, others are natural but not necessary in the development of a new country. The situation is far from hopeless, but both intelligence and skill on the part of many people will be necessary to control the environment aright in the interest of present and future manhood and womanhood.

Suggestions toward controlling Environment.

It will not be possible for us to consider in much detail either the specific evils in the American environment or their respective remedies. But in a general way we must indicate how education may contribute its part toward improving and controlling the situation.

Many Stimuli.

(1) Utilize many stimuli. As teachers and parents we do not know what all the inherited capacities are. Bring them out by using many stimuli. Change the stimuli from one set to another. The interests of children as they arise should be given free play to develop until they are exhausted; they may in succession be such discrepant things as playing at nursing or running a menagerie. These appetites of the soul feed upon little, are quickly satisfied, and leave the soul somewhat more developed than before. A given home, school, and community will afford many sources of such interests to children if a little freedom, encouragement, and help are provided. When it is evident that a given environment is exhausted in its resources to stimulate the child's growth, it is necessary to change the environment, to go on a visit, to travel, to attend another school, even to move elsewhere. A change of environment is stimulating in itself, and in unexpected ways, as grown people also find as they seek to keep their reactions fresh. It is particularly desirable that such contrasts as the city and the country, the mountains and the sea, should divide the time of growing souls. Perhaps at some unexpected moment some unanticipated stimulus out of the many the changing environment yields will discover to the soul its real bent; meanwhile all the other temporary in-

terests will have enlarged the powers of appreciation; the many stimuli will have helped the soul become what its inherited nature allows.

Nature Associations.

(2) Associate with Nature. This is a true principle of human development, because the physical environment so influences man. Those persons who have made Nature an associate, like Wordsworth, Bryant, Emerson, and Thoreau, have had their personal reward, and have also been enabled to transmit messages to their fellows.[1] The souls that assimilate the teachings of Nature become like their teacher in a character that is constant, firm, true, consistent, lawful, quieting, and vast. The growth of city life, the urgent demands of business, and the spoliation of the forests, as well as the legitimate clearings of a spreading population, have rendered Nature well-nigh a stranger to many whose ancestors were once her denizens. For the sake of the economic future, and especially for the sake of the spiritual present and future of man, it is essential that the face of Nature be preserved, in certain places at least, in its original aspect. But further, by reformation in elementary education in rural districts, the people must be educated for the country, instead of, as hitherto, for the town. The increasing attractiveness of farm and country life is a welcome sign in our generation. Through the use of science it is to be anticipated that the profit as well as the pleasure of farming will be enhanced. Meanwhile it is desirable that the city dwellers go to the country for outings and refresh-

[1] Cf. MacCunn, "The Making of Character," Pt. II, Chap. III, N. Y., 1907.

ment, and that some of the country be imported to the city in the form of parks, playgrounds, and school gardens. We have not yet realized in the West the Oriental benefits of living and teaching in the open, especially as an aid to the quieter mental virtues of contemplation, meditation, and reflection; our religious worship has particularly suffered thereby, becoming both narrow and artificial. It takes more time to feel the inspiration of Nature than most busy Americans think they have to give, but it remains true that few things so balance artificial lives as making friends with Nature.

Personal Associates.

(3) Associate with the best persons. And this because of the influence of the social environment in man-making. Persons, after all, are the clearest revelations of the meanings of existence. These meanings are many, according to the way in which life is taken. The best persons help us to take life in the right way. We should find the great persons, living and dead, in science, literature, history, and religion, and learn their secrets. Young people in college are often told and easily come to think that they learn most of later value in associating with each other; that they learn much is unquestionable; but they must also know that their present circle is both small and immature in comparison with what the world has produced of persons accessible to them by reading. That benefits should ensue from one's personal associations, it is necessary that one himself be something. As the Hindu wisdom has it, "Though he roam to sacred Concan, no dog will turn into a lion; going to holy Benares will make no pig an elephant; and no

pilgrimage will make a saint of one whose nature is different." This involves the third element in man-making, that of the individual himself. That associations with great personalities be beneficial, one must himself have some greatness in him, some understanding, and some responsiveness. But given these, the great associate reveals in reality what we ourselves may in a measure become.

Coöperation *vs.* Competition.

(4) Emphasize the coöperative rather than the competitive methods of teaching. Nature is competitive. Our whole industrial system is founded on competition rather than on coöperation, whence arise many of the gravest problems of an industrial democracy. The old teaching used the methods of competition, emulation, and rivalry. The spirit of Christianity, that of helping rather than hindering one's fellows, has not permeated the mass of society. The existing industrial monopolies which stifle competition are the product of the competitive system, the weaker competitors having been eliminated in the struggle. Industrial society has fairly well imitated the methods of survival characteristic of nature. Herbert Spencer, with all his study of altruism, remained an individualist always; competition was his fundamental principle; originality in his writings was such a hobby that he was unwilling to appear as having ever borrowed anything. Competition has indeed its place, as we saw in studying the influences of the social environment, but the individuality and selfishness it breeds must be supplemented by the breeding in some way of sociality and unselfishness. The schools can help by training pupils in the

methods of coöperation. The next generation can solve the problems of the social democracy somewhat easier if this generation trains the young to work with each other instead of against each other. Social education fits for social living.[1] School tasks may properly be assigned to groups of pupils, each one doing his part. Athletic teams subject the action of the individual to the good of the whole. Older pupils should help younger ones, and the strong should assist the weak. The school should be a miniature coöperative society, typifying the coming ideal human society.

Social Reformers.

(5) Be one alone, if necessary, to initiate a needed social reform. Like other people, social reformers are partly born and partly made. They need sanity, tact, patience, and wisdom. Individual initiative has wrought the greatest moral reforms of the world; in many instances the forward movement has taken the name of its initiator, Confucius, Buddha, Socrates, Christ, Mohammed. These men had vision and energy, the imaginative vision to see things as they ought to be and the practical energy to set about their accomplishment. In our own day the examples of such social workers as Jane Addams and Jacob Riis have stimulated many to help them. When history writes its chapter on Roosevelt, though it may discredit him for fastening the ideas of strenuosity and militarism upon America, it will surely credit him for introducing the standards of morality into political life. Many vacillators have at the thought of him stood upright. Every reader of the public prints is

[1] Cf. Scott, "Social Education," Boston, 1908.

aware of the mighty contemporary turmoil in our social life; one investigation of dishonesty follows another in continuous succession; political reputations years in building are unmade in a day; and the people reward their courageous moral leaders with the best offices of the land. It all signifies, not that we have fallen on evil days, but that we see the better days that ought to be; the public conscience is awakened; the purpose of social existence is being realized, viz., the establishment of a moral order among men. It is incumbent upon every individual to cultivate morality in his own garden, however small it may be, that the environment which moulds man into its own likeness may be improved.

The School Environment.

(6) Make the school an ideal physical and social environment. On the physical side the school-building should be of good architecture, of some solid material, in an attractive location, with well-kept grounds, with class-rooms well lighted, ventilated, and comfortably furnished, with walls appropriately decorated, with each room suggesting the topic discussed there, with texts æsthetic in printing, illustrations, binding, and color, with a well-equipped gymnasium, and scrupulously kept sanitary arrangements. The school should be the most attractive place in town, the democratic unifying agent of the community, the centre for social gatherings and improvement societies. As for the social environment provided by the school, it rests mainly with the teachers. They should make of themselves as admirable persons as they can for the sake of their pupils and their own self-respect. Patrons expect the teachers of their children to be models;

unfortunately they are sometimes disappointed. The corps of teachers of any community, as a matter of fact, is a fair reflection of the standards of the community; it ought to be somewhat higher; teachers should be active uplifting social forces in the community. The atmosphere of a school is constituted by its general personnel; it is the most pervasive of all the school forces; it is something that a visitor quickly feels, something that constantly shapes the lives of the pupils. This atmosphere should be sane, wholesome, idealistic, in which money shrinks from end to means, in which spiritual values are the end of living, in which fictitious social distinctions have no place, in which the single standard of social morality is taught and practised, in which the adolescent instinct of chivalry is truly directed, in which vital economy, the truest economy of all, preserves from destructive personal habits, in which the virtue of thrift and financial independence is inculcated, in which interests of the deeper and truer sort exclude all forms of low and vulgar amusement, in which the preservation of the body undefiled by disease or impurity is second only to the zealous guarding of white souls, in which all together, children, young men, and maidens become what future members of society ought to be. The school, though it takes a generation for its results to show, is one of the main agents of social redemption. Victories of the battle-field have been credited to the school; it will be a greater day when the victories of social peace may be so credited.

Out of many evils in the American life enumerated above, let us select for specific mention only one,

which the school may do much to combat. Tuberculosis is the great white scourge of humanity; yet it is due to environment rather than to heredity; and it is both preventable and curable. A commission recently appointed to report to the Boston School Committee on conditions among the school children estimated the total number affected at the present time at five thousand. It is an easy thing to distribute among school children for themselves and their parents circulars describing how tuberculosis may be prevented, may be cured, and, when present, may be kept from spreading. From one such, prepared by the associated charities of Oakland, I quote the beneficent information that "a careful and clean consumptive is dangerous neither to himself nor to others." Tuberculosis has proved so dreadful because it was so dreaded. Best of all, school buildings and children should be handled so as to reduce the possibilities of infection to a minimum, through equable temperature not above 68°, through abundant fresh air, through the reduction of dust to a minimum, through the more thorough cleaning of schoolrooms, and especially through the out-of-door school. This is one illustration of how the school may be the ally of medical and social prophylaxis. In similar ways, by enlarging its mission to society, the school can contribute its part to the solution of all the social problems, especially the related problems of the divorce and social evils. After all, just as "guilt is personal," so social problems must be solved ultimately only in individual terms. And the school has the individuals in their plastic period.

Tuberculosis and the School.

Thus we have tried to trace the influences upon

The Second Principle of Man-Making.

men and women of their environment, both physical and social, and have also tried to see the practical bearings of the discussion on education. Perhaps the reader carries the conviction that environment deserves to rank as one of the fundamental elements in man-making, and that consequently to improve man we must improve his environment. Heredity bestows capacities; environment affords opportunities. If then the first of the first principles of man-making is eugenics, the second is eutopias: *put into the environment what you want in the man.*

7. The Abuse of the Law of Environment.

Though appreciating the greatness of the influence of environment, though realizing that not even heredity would be possible without the body that environs the gametes, still it is possible to abuse this law. We do tend to become adapted to our environment, but we abuse, by exaggerating, this law when we say that men are made, that they are creatures of circumstance, that they are the products of environment, that they are like pieces of bark floating upon the surface of the current of social influence, that no man can be better than his environment. Job abused this law when he asked, "Can a clean thing come out of an unclean?" Nathanael abused this law when he asked, "Can any good thing come out of Nazareth?" The record of any school or college a hundred years old will show that its later environment was better, but that its earlier, poorer environment also produced some of its greatest alumni. Those who suppose a man can be no worse than his social environment should study the character

of Judas, and those who suppose a soul can be no better than its social environment may remember Jesus. In our consideration above of the relation of geography to man we saw that the physical environment alone was not able to explain man and his history. It is very evident to reflection that there could be no progress whatsoever in humanity, not even any evolution of species, unless here and there individuals rose above the prevailing standards, were followed by others, and perpetuated their strain. The environment is a condition of man's being made; it does not alone make him. In a true sense any great soul is superior to any event that can happen to it.

That the individual counts for something in relation to his environment is very deftly illustrated by Plato as follows: "Themistocles answered the Seriphian who was abusing him and saying that he was famous, not for his own merits but because he was an Athenian, 'If you had been an Athenian and I a Seriphian, neither of us would have been famous.'"[1]

And great as are the combined influences of heredity and environment, the element of individuality still counts. We may abuse these joint laws, and do so, indeed, when we say that combined they are the adequate explanation of a man. We have explained the man by leaving the man himself out. This may be an adequate way of explaining any organism, like a plant, whose consciousness may not be able to take note of its inherited inclinations and its environing opportunities, but it is inadequate for all the higher

[1] Rep. 330 A (Jowett, Tr.).

conscious animals. When the theory of evolution is finally written, it will be, as we have seen, some form of a psycho-physical theory. The animal, the child, the youth, especially the man, take a share in developing their own being. They react characteristically and sometimes voluntarily upon their inherited capacity and their environing opportunity. Such reaction is due to the organism itself, to its will, as we say, to whose influence in man-making we now come.

REFERENCES ON CHAPTER III

BRADFORD, A. H., Heredity and Christian Problems, N. Y., 1895, Chap. V.

BRINTON, D. G., "Factors of Heredity and Environment in Man," *Amer. Anthropologist*, XI, 271–277, Washington, 1898.

CALDERWOOD, H., Evolution and Man's Place in Nature, Chap. IV, London, 1893.

CONN, H. W., The Story of the Living Machine, Chap. III, N. Y., 1899.

CRAWLEY, "Education and Evolution," *Rep. Brit. Ass. Adv. Sc.*, 1907, pp. 718–719.

DUDLEY AND KELLOR, Athletic Games in the Education of Women, N. Y., 1909.

FYNN, A. J., The American Indian as a Product of Environment, Boston, 1907.

JAMES, "Great Men and their Environment," in The Will to Believe, N. Y., 1897.

HAECKEL, The Natural History of Creation, Chap. X, N. Y., 1876.

LOCK, R. H., Recent Progress in the Study of Variation, Heredity, and Evolution, N. Y., 1910.

MACDOUGALL, D. T., "Heredity and Environic Forces," *Science*, N. S., 1908, pp. 121–127.

—— "The Direct Influence of Environment," in Fifty Years of Darwinism, N. Y.

METCALF, Organic Evolution, pp. 163–188, N. Y., 1904.
MORGAN, T. H., Experimental Zoölogy, Chaps. XVI, XXV; also pp. 315–320, N. Y., 1910.
—— Evolution and Adaptation, Chap. IX, N. Y., 1903.
ORR, H. B., Theory of Development and Heredity, Chaps. III and IV, N. Y., 1893.
POULTON, E. B., Essays on Evolution, Oxford, 1908.
ROMANES, G. J., Darwin and After Darwin, Vol. II, Chaps. VII–X, Chicago, 1895.
SEDGWICK AND WILSON, Biology, pp. 102–110, N. Y., 1895.
[Several Authors], Modern School Buildings, N. Y., 1910.
SPENCER, H., Principles of Biology, 2 vols. See Index under "Environment," N. Y., 1864–1867.
SUTTON, Evolution and Disease, Chaps. I and II.
THOMSON, J. ARTHUR, "Synthetic Summary of the Influence of the Environment upon the Organism," *Proc. Roy. Phys. Soc.*, Edinburgh, IX, 446–499.
TYLER, J. M., The Whence and Whither of Man, Chap. VII, N. Y. 1897.
—— Man in the Light of Evolution, Boston, 1899.
VERNON, H. M., Variation in Animals and Plants, Chaps. VI–X, N. Y., 1903.
WARD, L. F., Applied Sociology, Boston, 1906.
WEISMANN, A., The Effect of External Influences upon Development, London, 1894.

CHAPTER IV

WILL AND EDUCATION

1. The Meaning of Will.

By "will" in this connection we mean the part the individual himself plays in his own making and in the making of society. Our preceding discussions have regarded men and women as products, — products of heredity and environment; we have now to regard them as producing, — producing to a degree both themselves and others. Hitherto we have lost sight of the man himself we were seeking to make; now we have to recognize him as contributing to his own making. The term "individuality" would thus be a synonym for "will" as one of the three elemental processes in man-making. Especially are we to avoid the idea that "the will" is "a faculty" of mind distinct from other so-called "faculties," such as intellect, memory, reason, and emotion. All the functions of consciousness are interrelated; they constitute one organic unity, one conscious personality, and "the will" is the name for the fact that consciousness is an agent. Consciousness is a knowing, sensitive agent. It is this agency phase of consciousness that constitutes our unique individuality; we are individuated in space by our bodies, in character by our purposes and deeds. Knowledge may be shared; one's deed remains his very own. Thus it is the active aspect of consciousness that we call "will," and it is this will

which constitutes our individuality, and it is this individuality whose influence in man-making we are now to consider.

Individuality and Personality.

It may help some in this preliminary classification of terms to distinguish "personality" from "individuality." The person is the complete consciousness, including the various cognitive, emotive, and motive phases; the individuality is the motive or will phase of the person. Personality is a concrete term; individuality is an abstract term. In common usage the terms "person" and "individual" are synonymous, but by "individuality" one means particularly the purposes, deeds, and character of the person. These logical distinctions, tiresome perhaps at the beginning, may serve us well in the end.

2. Historical Survey of the Recognition of the Individual.

It will give background to our later discussion of the part played by will in man-making if at this point we take a brief survey of man's development in society with this question in mind: what recognition has been accorded the individual in the past?

The Social *vs.* the Individual.

The history of civilization and of its mirror, education, shows a constant conflict between the interests of society, the big individual, and of its members, the small individuals. Theoretically, there should be no such conflict; the best society is highly individualized, and the best individual is highly socialized. But this theoretical ideal is itself the product of centuries of practical and sometimes groping travail. The realization of this ideal is the true goal of individual and social human development. Meanwhile human history shows a very painful and slow progress toward

this happy, nay, blessed, state. In some cases the social interests have crushed individuality; in other cases individual interests have shattered old social values.

The General Formula of this Conflict.

The course of the progress in general has been from the social, to the individual, to some reconciliation of the two. Then after a lapse of time, through the reëntrenchment of the social, the same dialectic again, with perhaps a better reconciliation. And then, the same again and again. The histories of individual nations show repeatedly this movement from arbitrary power, to revolution, to a temporary harmony. The history of universal mankind shows the same immanent dialectic, from absolutism, to successful rebellion which is revolution, to democracy, or the synthesis of the universal and individual wills. This formula is indeed abstract and schematic; it may remind one of the Hegelian thesis, antithesis and synthesis; it certainly does not do full justice to the concrete facts involved in this social-individual phase of the human movement; and other formulations are without doubt possible. I think there is no single cipher to the mystery of human evolution.

Has History a Philosophy?

But given such a broad generalization, however inadequate, it unavoidably raises the question as to the philosophy of history. Is the description of human evolution suggestive of the nature of being? It certainly is to some historians, the philosophically minded ones. Bancroft says of the American democracy that it "proceeded as uniformly and majestically as the laws of being, and was as certain as the

decrees of eternity." It is possible to reject or accept this idea.[1] My present point is that there is some philosophy of human history, whether we have it, or are ready for it, or can ever hope to get it, or not. And I am constantly surprised that men who are interested enough in man to discover the facts concerning him are not more interested in considering their possible meaning. Facts are worth while only as their significance is appreciated. So I am ready to encourage any students of history to accept and improve upon the most general descriptive formulas and then seek for the ultimate meaning behind them. In the case of our own generalizations concerning heredity, environment, and will, we shall have something to say in our last chapter on their possible philosophical significance.

Illustrations.

But we must seek to illustrate the recurring conflict between the social and individual human interests. Among primitive peoples the social interests, as embodied in the will of the chief for the whole clan or tribe, predominate. The chief is free and rules, the others are his subjects. He is the single tribute-taker; they are the tribute-givers. The emphasis is on tribal custom, not on individual initiative. The woman particularly is the burden-bearer in primitive communities. Were her burdens put upon her or self-imposed? "Bebel says that 'woman was the first human being that tasted bondage. Woman was a slave before the slave existed.' But this expression takes all the aroma from her fragrant life. She made a servant of herself, and willingly, before there was

Primitive Peoples.

[1] Cf. Matthew Arnold, "A Final Word on America."

any slavery. The emancipation of woman is from a self-imposed bondage, as everybody knows."[1] The bondage may have been self-imposed at the outset; it has not always remained so. Test it where you will, the position of woman in society is a measure of the recognition of individuality.

Oriental Peoples.

In the Orient, again, the social interests predominate, this time as embodied in the universal will of the despotic ruler. The despotism is absolute; the ruler alone is free, the others have their lot in life predetermined for them. The emphasis is on the social institutions, the castes of India, the family in China, the priestly religion in Egypt. In this life the soul is suffering the penalties of misdeeds in a preëxistent life; the law of Karma is exacting, individual effort is unavailing. A representative passage is the following, from the Hindu "Panchatantra": "A gazelle that had broken the noose, had tossed aside the trap laid for him, had broken with ease through the net, had escaped far away from the forest in which he was encircled with a ring of flame, and by his wonderful fleetness had outrun the reach of the hunter's arrows, in his swift flight fell into a well. What avails the utmost exertion of man when the fates are against him?" As for woman in Oriental life, her position is represented in a passage from the Code of Manu (V, 17): "A female child, a young girl, a wife, shall never do anything according to their own will, not even in their own house. While a child she shall depend on her father; during her youth on her husband; and, when a widow, on her sons."

[1] Mason, "Woman's Share in Primitive Culture," p. 284, N. Y., 1900.

The development of the national consciousness to the point of negating individuality appears in the soldier-consciousness of modern Japan, in the virtue named *Bushido*, or self-forgetful loyalty, which played so large a rôle in the late Russo-Japanese war.

Greece.

In Greece, the interests of the city-states dominated individuality. Sparta is the best illustration. But the city-states were smaller than the vast Oriental empires, and, though there were many slaves, there were also some freemen. Under Pericles for a short while the social and individual interests were so well harmonized that his Athens represents the first of the several historic approaches to the coming golden age of man. The rise of the Sophists in Greece is the first illustration, after centuries of Oriental universalism, of extreme individualism. Theoretically, Socrates, Plato, and Aristotle adjusted in their teachings the social and individual interests, giving the world ideal models of the solution of the problem; practically, Greek national life went to wreck on the rock of individualism and fell an easy prey, first to the conquering Alexander, then to the Roman eagles. Greece is the transition from Oriental absolutism to Western individualism; in Greece, in the tragedies of Æschylus, Sophocles, and Euripides, fate is still the power behind the throne of Zeus; yet in Aristotle's Ethics man is assigned power over his deeds; the elements of the problem of fate and freedom were at last juxtaposed. In Æschylus,[1] Zeus himself "may not avoid what is destined," and Sophocles makes the Chorus in

[1] "Prometheus Bound."

"Antigone" say, "Pray no more now. From his appointed woe man cannot fly." In contrast with these views of gods and men as effects of fate, Aristotle presents us with the view of man as himself a cause, saying, in the third book of his Ethics, "Man, then, as has been said, appears to be the efficient cause of his actions."

As for the place of woman in Greek society, the older view is represented by a saying of Ismene, one of the female characters in Sophocles' "Antigone": "Nay, rather let us bear in mind that we are women, so not fit to strive with men." And Pericles himself, in his wonderful Funeral Oration, observes: "And, if I am to speak of womanly virtues to those of you who will henceforth be widows, let me sum them up in one short admonition: To a woman not to show more weakness than is natural to her sex is a great glory, and not to be talked about for good or for evil among men." But the Greek regard for individuality passed on to woman to such a degree that the conservative Aristophanes could satirize the movement in his comedy, "The Women's Festival."

Rome.

In Rome the social interests again, in the form of the state-consciousness, dominate the individual. Rome did not produce as great individuals as Greece, but she produced a greater state. In conformity with Roman law public officers at times condemned their own sons to death. The rights of the husband and father over wife and children were all but absolute. Though noble matrons here and there rose to prominence, the Roman law, strictly speaking, was applicable to men only, the woman requiring a male

sponsor in her legal transactions. The individual rested in security in the consciousness of the power of state to which he belonged; "I am a Roman citizen" was the Open Sesame to justice before imperial magistrates even in distant provinces. The consciousness of the state as opposed to the individualism that would destroy it is clearly seen in the conflict between Cicero and Catiline; in the First Oration against Catiline appear the words: "Now, your country, which is the common parent of all of us, hates and fears you, and has no other opinion of you, than that you are meditating parricide in her case; and will you feel neither awe of her authority, nor deference for her judgment, nor fear of her power?" That the sense of individuality was present, though subordinate, among Roman matrons is shown by their opposition to the Appian Law, enacted during the heat of the wars with Carthage, to the effect that "no woman should possess more than half an ounce of gold, or wear a garment of various colors, or ride in a carriage drawn by horses in a city, or in a town, or any place nearer thereto than one mile, except on occasion of some public religious assembly." After twenty years, and a vigorous, though not militant, campaign of persuasion, the law was repealed, despite the opposition of even Cato the Censor. On the whole in republican Rome the welfare of the individual was merged in the public good. The presence of centralized power caused Rome to rise; the absence of moralized individuality caused Rome to fall.

The Teutons

The sense of individuality is keenest among the Teutons of all the peoples of the world. Man as man

is free. The towering Alps divide Europe between those who love authority, in the South, and those who love freedom, in the North. Among the Teutonic peoples the finest fruits of individuality have appeared in local self-government, representative government, the rule of the majority, individual initiative, and the greatest modern states. The Renaissance began to develop individuality in the South, but the movement was early checked by the terrors of the Inquisition and the system of the Jesuits, and passed instead into the Reformation of the North, freeing private conscience and judgment. France has been a central battle-ground between the forces of absolutism and individualism, the acme of the former appearing in Louis XIV, of the latter in the French Revolution. The individualism of France is imported; the blood of France naturally is imperial, not democratic. It is the Teutons who have best shown their inherent capacity for self-government. It is beside our purpose to trace this principle in its gradual development from the primitive Germans of the Black Forest to the modern Americans. The clear vision of Tacitus already saw and described the salient traits of Germanic character, so contrasting with Roman corruption. Of the Germanic councils he writes: "About minor matters the chiefs deliberate, about the more important the whole tribe. . . . The king or the chief — according to age, birth, distinction in war, or eloquence — is heard, more because he has influence to persuade than because he has power to command. If his sentiments displease them, they reject them with murmurs; if they are satisfied, they brandish their spears." And concerning the

lofty recognition of woman by these warlike tribes Tacitus says: "They even believe that the sex has a certain sanctity and prescience; and they do not despise their counsels or make light of their answers. In Vespasian's days we saw Veleda, long regarded by many as a divinity. In former times too they venerated Aurinia, and many other women; but not with servile flatteries or with sham deification." It is no accident but racial logic that modern movements for a wider emancipation of women arise among the Teutonic peoples, however those movements do or ought to eventuate.

Christianity.

Modern Western civilization is a stream with four main composing tributaries, the Greek, the Roman, the Teuton, as stocks, and Christianity as an adopted religion. All the world's great religions have originated in the East. Of these religions Christianity is the only one fully to recognize individuality, Zoroastrianism in Persia coming next to Christianity in this respect; and Christianity is the only Eastern religion to make headway in the West. This again is no accident, but a case of racial apperception; Christianity provided that individuality which the West, especially the Teuton, demanded. It is significant of racial traits that the primitive individualism of Christianity was overlaid by universal authority in Rome, only to be revived again by Luther, Zwingli, Calvin, Knox, and others of the North. Luther did for Christianity what Jesus did for Judaism, — emancipated it from external and material form and power.

But was primitive Christianity characterized by the recognition of individuality? According to the teach-

Early Christianity and the Individual.

ings that have come down to us the individual soul is of supreme value, its loss for the possession of the earth is a poor sacrifice, its repentance causes heavenly joy. The Heavenly Father marks the sparrow's fall, and man is of more value than many sparrows; even the hairs of the head are numbered. Women, both the good and the bad, both Mary, and Martha, and the Magdalen, shared equally with men the blessings of the kingdom, and the great apostle to the Gentiles eliminated the distinction in Christ between the male and female. Children, hitherto uncounted, if girls, and little regarded till youth, if boys, were chosen as object-lessons of the new Kingdom.

Christianity and Judaism.

Christianity is fulfilled Judaism. This is true in general, and it is true particularly as regards individualism. The eighth-century prophets, beginning with Amos, were moral individualists. The extreme of individualism appears in Ezekiel: "The soul that sinneth, it shall die." A suffering individual is Jeremiah, and a healing, self-sacrificing individual is described by Isaiah. Jesus was a religious individualist, a prophet rejecting the priestliness of his times, a pure soul immediately sensing God and proclaiming the religion of spirit against the religion of materialism and formalism. His soul had grown under the tutelage of the old prophets. He solved the problem of the clash between authority and freedom by yielding obedience in things temporal to the powers that be, even unto death, and by emancipating the human spirit in things eternal. God is spirit, not local; and the service due Him is different from that due Cæsar. In the temporal world of power without, the individual is sub-

jected; in the eternal world of spirit within, the individual is free before God. The Kingdom of Jesus is not of this outward world, it is within. Jesus is the emancipator of the spiritual individual; it is a great mistake to regard him as a social agitator; but he trusted the new spirit, like leaven, to leaven naturally in time the whole social lump. And this expectation of his the centuries are realizing.

Individualism in the History of Christianity. Paul.

The history of Christianity has not always left the individual spiritually free. Paul rejected the requirements of Jewish legalism. Also he closely followed Jesus in preaching obedience to the higher powers, but he departed from Jesus in introducing formal, even fixed, relations between God and the human soul, in such doctrines as foreknowledge and foreordination. Jesus had been at pains to connect human suffering with God's glory in its relief and to disconnect human suffering and past sins; he rejected the Oriental idea that this blind man's sin in some preexistent state might have caused him to be born blind (cf. John 9: 2); in Paul, consciously or unconsciously, the Eastern ideas of the subjection of the soul to the heavenly powers parallel to the subjection of the body to the temporal powers come into the Christian tradition.

In St. Augustine, following Paul, the doctrine of election is perfected. In the popes temporal and spiritual powers are united, and the body and soul of the individual yield obedience to the Church.

The Middle Ages.

The Middle Ages, not felt as "dark" to themselves, nor deserving to be so called by us, witness to the domination of individuality by the system of the

Church. Rome did not become Christian so much as Christianity became Roman.

Protestantism.

The significance of the Renaissance and the Reformation for individuality we shall see briefly later. Here it is important to note that authority, temporal and spiritual, outlived the Reformation. Geneva became "the Rome of Protestantism." The paradox in Calvin is that as a reformer he was an individualist, and as a reviver of the Augustinian tradition of election he was a predestinationist. The Presbyterians have likewise in their history on the one hand been the parents of human democracy and on the other hand advocates of the Divine autocracy. In most Protestantism, though born in the right of private conscience, reason, and the personal interpretation of the Scriptures, non-conforming individualism is as heretical as in Catholicism. "Arminianism," affirming among other things the power of the individual to resist Divine Grace, and even to fall from it, was condemned in the land of its birth, though the Wesleyan Methodists have continued these views.

The Protestant Paradox.

A paradox, similar to that in Calvin's case, runs through most Protestantism; it defends private judgment, but all must believe in foreordination. The reason for this paradox is that Protestantism went only a part of the way toward individualism; by private conscience it changed authorities; it substituted for the authority of Rome the authority of Scripture; its principle was that Scripture should be personally interpreted; its practice usually was that Scripture was authoritatively interpreted.

So the matter stands to-day in the Christian world.

The spirit of Jesus and of individualism and of tolerance is leavening still both Protestantism and Catholicism; but the leaven works slowly and the lump is large. It will probably be felt, without having to be said, that our purpose in this review of Christian history on the question of "the system against the man" is simply to understand, not to estimate, least of all to condemn.

These views, then, represent the fortunes of will in the long past. Our ultimate question is, what is the place of will in man-making? To help us still further in answering this question, let us review the general estimates of will in the just past.

3. Modern Estimates of the Individual.

The period of history since the European Renaissance has witnessed the assertion of the individual will against established institutions, also the recognition of the fatuity of mere individualism, and finally the demand for proper adjustment between the individual and society. The Renaissance was the uprising of suppressed individuality; the interests of this world asserted themselves against the interests of the other world; men began to discover old manuscripts and new continents, they invented the compass and gunpowder, they set up printing-presses and began to make books.

The Renaissance.

The Protestant Reformation was the Renaissance of the North; it was the rise of individuality in religion. The Renaissance and the Reformation, expressing individuality, destroyed for all time that unity of life which characterized the Middle Ages. Modern life is characterized by variety. Against the principle

The Reformation.

of individuality in religion, which was the Reformation of Protestantism, came the reaction of the mediæval principle of authority in religion, which was the Counter-Reformation of Catholicism. The warfare between these two parties and principles has been long and bitter, though signs of its abatement are plentiful; it divided Europe into two, mainly with the line of the Alps.

The French Revolution.

From the spheres of learning and religion the principle of individuality passed into the sphere of politics. Its extreme recognition appears in the emotional philosophy of Rousseau and its extreme application in the French Revolution. The destructiveness of mere individualism is here apparent to all, whether friends or foes of individuality. It became evident to all sober minds that mediæval authority was one extreme and the individualism of the Revolutionists was another, and that the need was for the golden mean of reconciliation of these two extremes. The great modern states, Germany, France, England, and America, are the vast practical illustrations of the political supply of this need.

Anarchism *vs.* Socialism.

It is characteristic of minds ignorant of history to propose solutions of modern questions in terms of either extreme. The anarchists, for example, are extreme individualists. The Socialists are, as their name implies, at the opposite extreme. To the anarchist the government is nothing and the individual is everything; to the Socialist, the individual is nothing and the government is everything. To the historic type of thinker, government and individuality are two extremes of one reality; true government

must express individuality, and true individuality must embody the laws of the government. Modern industrial conflicts between labor and capital are really illustrations of the effort of the two principles of the individual and the organization to live together. Trade unionism is the effort to preserve individuality by organization. The social turmoil of our times, so confusing to the casual observer, is really the effect of the efforts of adjustment between the forces that make and crush individuality. The solution will be neither anarchistic nor socialistic, but humane, and, in the broadest sense, Christian.

Exaggerations of Will.

Passing now from the estimate of will in society at large to the estimate of will in the person, it was natural that the modern period first saw an exaggeration of the power of will. Under the spell of the social momentum disengaged by Renaissance, Reformation, and Revolution alike, it was natural that all things seemed possible to the individual. He came to exaggerate the power of his own will. The whole of the eighteenth and the first half of the nineteenth century revealed a tendency to magnify unduly the influence of the individual will. We see an illustration of this in the exaggerated faith in education of the period of the Enlightenment, illustrated in the sayings of Leibnitz and Kant. We see the same illustrated in such sayings of this period as: man is the arbiter of his own destiny, the architect of his own fortune, the maker of his own future, and the like. Such sayings attain a certain popularity, as they appeal to the personal powers. Emerson, quite inconsistently with his doctrine of

the transcendental Over-Soul, became in some of his passages the American mouthpiece of this doctrine, as when he says, "Man is everything, environment is nothing"; "Hitch your wagon to a star"; "The youth replies, I can," etc. Lincoln has commonly been cited as an illustration of the view that the will is the sole essential thing in achievement, it being forgotten that he himself said, with some degree of truth certainly, "All that I am, or ever expect to become, is due to my mother."

Minimizing of Will.

Its Causes.

But during the latter half of the nineteenth century this tendency to exaggerate the power of the individual will was offset by an opposite tendency, equally extreme probably, to minimize it. This tendency was due to the recognition of the fact that man is a very small part of a very vast whole and that

Biology.

the part is determined by the whole. Biology, for example, began to explain animals in terms of heredity and environment and to claim that man, as an erected animal, was no exception. He was made by the general forces that produced other animal life and had no part in his own making.

Sociology.

With the rise of biology came also sociology, the study of men in groups and masses, this being the natural state of man. From the sociological standpoint the actions of the individual are largely, if not entirely, explicable in terms of certain social and mental forces named imitation and suggestion and the like. "The individual is a social deposit," as I heard one sociologist observe. Such a view does not intimate that the individual has anything to do with depositing himself.

To the influence of the biological and sociological viewpoints in helping to explain the recent minimizing of the will of the individual may be added that of a machine-age. Modern achievements have been realized by machines, — the cotton-gin, the sewing-machine, the type-setting machine, the war-vessel, steam-engine, the flying-machine, etc. Each machine has displaced some type of individual laborer. Machines have also displaced the apprentice system that made the laborer an individual, and prepared the way for the specialized system that reduces the laborer to a part of a man and in some cases almost to a part of the machine. The work of the modern world is done by grinding machinery destructive of individuality. The workman finds no freedom in his work, but only from his work. We must have machines; they will continue to supplant, and, in some instances, to degrade, the laborer, diminishing our sense of what man can do. But, if we regard them rightly, we shall see they are but expressions of the will of man, fulfilling his larger purposes. The more wonderful the machine, the greater its inventor, and the more skilled its manipulator. It is not necessary that an age of machinery crush the sense of personality, but it is necessary that the modern workman have some resources other than his work.

An Age of Machinery.

To all these explanatory influences may be added yet another, that of a mechanical philosophy. The tendency to eliminate will in the explanation of the individual is closely associated with the tendency to eliminate will and personality in the explanation of the world. A mechanical explanation is the ideal of

A Mechanical Philosophy.

all scientific endeavor. Physics, chemistry, biology, physiology, in fact, all the modern physical and natural sciences, tend to explain one material phenomenon in terms of an antecedent and equivalent material phenomenon, known as its cause. Thus all causes are viewed as material in nature. Physiological psychology adopts a similar scientific standpoint, and explains mental states in terms of brain-states, said to "correspond" with the mental states. The soul of man is thus viewed by science as a mechanism, part and parcel indeed of the vast mechanism we name the universe. Later we shall have occasion to criticise this view. For the present it is enough to observe that this view of the soul exists, that it is part of a current mechanical, in some instances also materialistic philosophy, and that it is one of the influences tending to minimize the importance of the human will in the making of men and women.

Thus we have tried to describe both the enlarged and the diminished estimates of the individual will that have prevailed since the rise of individuality in the modern period of the world's history. On the face of it, it is too much to say that the human will can do anything it undertakes — this is an exaggeration. Is it not also too much to say that the human will can do nothing? It evidently is to those who observe that man's machinery, however crushing in instances to man's individuality, is nevertheless the product of man's will to invent and the fulfilment of man's purposes to produce economically and on a vast scale and to master the forces of nature. It is really surprising that man will sacrifice himself under

the wheels of the Juggernaut of mechanism he has himself constructed.

4. The Future of Individualism.

After so much review of past and present estimates of will, seeing particularly the swing of action and reaction between a magnified and minimized view of will, the question naturally arises, what of the future? Let us then clearly raise the question, after seeing as we have the slow movement of the whole world in the direction of individualism, with many a back-stroke, however, what the end of this development is or ought to be.

Extremes must meet.

Utmost individualism in politics is anarchy; in religion is private devotions only; in philosophy, which we did not review, would be some form of pluralism for the world and "the liberty of indifference" for man. It is easy to see that on the basis of mere individualism, no church, no state, and, we may add, no cosmos, is possible. On the other hand, utmost universalism is absolutism in politics, quietism in religion, and Pantheism in philosophy and religion, all of which have characterized the East. Under these conditions human society is stable, but stationary. Change in politics is treason, in religion is heresy, in the world is illusion. The ideal for man is dreamless sleep on earth and absorption in heaven. The thesis of the East is permanence; the antithesis is that individualism, which has appeared in the West in Greek sophistry, the origin of Christianity, the Renaissance, the Reformation, the French Revolution and modern democracies, is change; the synthesis is certainly to be some adjustment of the claims of permanence and change, of authority and freedom.

Illustrations.

When authority ceases to represent individuality there has been and will be revolution; when individuals win their freedom, there has been and there must be organization and authority to preserve what has been gained. The absolutism of George III caused the American colonies to assert their freedom; to preserve this dearly bought possession as a heritage they organized, first loosely into a confederation and then more compactly into a union. When the central government assumed powers over the states not expressly delegated by the Constitution of the Union, the Southern States, in defence of their rights as states, fought for independence; the war failing, a still more compact union resulted, and centralization was advanced. Perhaps the pendulum of progress will continue to swing between the extremes of universalism and individualism in all man's affairs, but the ideal evidently is a human society whose laws are just and authoritative and whose individual members are free, — a society of individual liberty and social union, of freedom under law, of change and permanence. Authority must be tolerant of individual change and provide for it within the system; individualism must patiently submit to being controlled by an authoritative system that is the true expression of its own rational will. Particularly are law and authority for children, and liberty and reason for adults, both among men and nations and races.

The Goal of Social Evolution.

Our review of historic human development indicates the goal of the process to be an individualized society and a socialized individual. This is a unity of greatest variety and a variety with greatest unity. Had we

taken a wider sweep and considered the evolution of organic forms, or a still wider sweep and considered the evolution of the inorganic universe, the same conclusion would have been indicated. Everywhere the progress has been from the universal, to the individual, to their concrete unity; from the homogeneous, to the heterogeneous, to their closer unity; from the undifferentiated, through differentiation, into integration; from immediacy, through mediation, to concreteness. The formulas of science and philosophy, of Darwin, Spencer, and Hegel, are all at one here. Human society, the human body, the human mind, the animal body, the material universe, each and all are concrete unities of diverse elements. Universal evolution has moved in the direction of individual differentiation, but the individual so differentiated embodies the type in himself.

Summary of the Recognition of Individuality.

All this is abstract enough, perhaps too abstract for clear understanding. The next point will be more concrete. Our initial question was, what recognition has been accorded individuality in the world's progress; our general answer is a constantly enlarging recognition of the rational, not eccentric, individual. This suggests that the will of man has been more and more recognized as contributing to his making or unmaking. The Oriental will is paralyzed; the Greek will was very active in support of the city-state; the modern will demands self-expression, and modern states are the best illustrations so far forthcoming of the objectified will of all the people.

We have now reviewed the recognition of individuality in the long past and the near present, and have

anticipated what the future may reveal. This is all preliminary to the question as to the golden mean in estimating the influence of the individual will. What does will contribute to the making of men and women?

5. Anticipations of Will in the Preceding Discussions of Heredity and Environment.

Still briefly delaying our answer for the sake of a better one perhaps when we reach it, it may be well for us to note as a further preliminary the anticipations of will in the preceding discussions of heredity and environment. We could not describe the action of these forces in making man without also involving man's reaction to these forces, which is the first form of his will. In discussing heredity, for instance, such matters came up as "tropisms," "selection," "sexual selection," "organic selection," and the like, — all indicating the rôle played by the individual itself in making both itself and its race. "Sexual selection" particularly indicates the big rôle mind through its tastes and preferences has played in evolution. Likewise we had to point out that character is not inherited, though inherent characteristics may be; neither is character a product of environment; it is peculiarly the acquisition of the individual through his reactions upon heredity and environment.

In "Heredity."

In discussing environment too we came upon will, by anticipation. The effects of use and disuse upon the organism, and also upon its offspring, if we adopt the Lamarckian hypothesis, suggest will, for it is the part of the individual to use or not to use. The very term "natural selection" implies a kind of unconscious purpose in Nature, choosing the fit and rejecting the unfit. The "adjustment" of the individual to its en-

In "Environment."

vironment, which is the essential condition of its survival, is a reciprocal process; the environment weeds out the unfit, and the fit find propitious places in the environment. The environment modifies the organism, and the organism, in turn, modifies the environment. Without meaning to imply will as a third element in the process, in addition to heredity and environment, the scientist yet naturally adopts the language of will, as when De Vries says: "Each plant must have sought out the conditions where it could thrive best on account of its given peculiarities."[1] Also we had to speak of the modifications of environment by will, as in irrigation and fertilization of soils. Even our "duty to environment" had to be discussed, but "duty" clearly is a category of will. Such influential forces of the social environment as "imitation" and "suggestion" also imply the conscious response of the individual to certain stimuli, which is a phenomenon of will. Other instances may likewise be recalled of the way in which the recognition of will forced itself upon us in our discussions of heredity and environment that tried to leave will out. Thus, in sum, our discussions both of the historic and scientific bearings of our question prepare us for a statement, though no extravagant one, asserting individual initiative as one of the man-producing forces.

6. The Contribution of Will to Man-Making.

What, then, at length, is the contribution of will to man-making? In the first place, it is through will that we develop or neglect the capacity bestowed by heredity. A gifted person may idle away his time;

[1] De Vries, "Plant-Breeding," p. 335.

Development of Capacity.

an average person may improve himself as best he can. It is for the man himself to say whether he will strive to be all that Nature intended him to be or not. A capacity undeveloped is as fruitless as no capacity at all, as a seed unsown is as barren as a dead seed. It is by will that we realize capacities, that we neglect capacities, that we choose to be or not to be what our inherent potentialities allow.

An Objection.

If one objects that our handling of capacities is itself a product of heredity and that no element of will is involved, the answer is the appeal to the conscious choice of personal experience. We experience the fact that we consciously choose to do or not to do what lies within our power. We do not choose our capacities, they are ours by heredity without choice; but we do choose to realize or slight them, we do feel such choice is in our power, and corresponding feelings of satisfaction or reproach accompany such choices. Such feelings would not be appropriate if the choice itself were inherited; nor would the feeling of the power to choose be present if the choice were inherited, for concerning our mental inheritances we feel contrariwise that they could not have been nor could they be different. We must then conclude that the individual has some power in dealing with his inheritance which is not predetermined in its operation by his inheritance.

Use of Opportunity.

Secondly, will uses or abuses the opportunities of environment. Such use or abuse makes a vast difference in the outcome of the individual. An unused opportunity is as fruitless as no opportunity at all. By the use of opportunity capacities are realized and one is prepared for larger opportunities just

ahead. The opportunity is the gift of the environment. It cannot be said in any strict sense that a man makes his opportunities; he can use them as they arise to more or less advantage. Further, if those that the present environment affords do not suit him and give him the chance he needs, he can select another and more suitable environment, as when he leaves his home-town and school to go off to college. Still further, to some extent a man can remake a present environment which he does not like, as when a citizen provides a public library for his home-town. By will too we may refuse to imitate the morals of our social environment; we may refuse to act upon the suggestive ideas that captivate so many of our fellows. We may be independents and do our own thinking; we may be radical in the midst of conservatives, or conservative in the midst of radicals. We may refuse to shape our opinions by the editorials of our favorite newspaper. In all these ways the element of individuality is expressing itself in relation to the environing opportunities. Whether we yield to or resist the social stimuli to action, we are expressing our individuality. In this connection it should be remarked that the highest mental power of the individual is that of critical judgment, making of him a full person and inducing social progress.

An Objection.

If one here objects that the environment not simply presents the opportunity but also determines our response to it, thereby eliminating the personal element of will, the answer again is the appeal to the personal experience of conscious choice. We feel it is in our power to work or to loaf during the morning

hours of vacation days, and that the double opportunity does not itself determine our specific reaction; we ourselves determine that. Here again, then, in relation to the situations provided by circumstance, the power of the will in the making of the man shows itself.

In his first Baccalaureate, President Lowell told the Harvard seniors that environment is not master. "It is also true," he said, "that a man creates to a great extent his own environment. He is not affected equally by everything that surrounds him. He is mainly influenced by, and conversely his personality reacts upon, those things of which he is conscious, which he perceives. . . . The differences in men's careers are often based not so much on the opportunities they have had, as upon the use they have made of them." A man's real environment is the things of which he is conscious, over which he has some power through his selective attention and interests.

The Law of Will in Man-Making.

We were able to state the forces of heredity and environment in the making of men and women in the form of laws; can we not do the same for will? It would be as follows: within the limitations of inherited capacities and environing opportunities, man becomes what he will. This is the long-sought answer to our fundamental question as to the relative place of will in man-making. It clearly means that we cannot become what we will; it equally clearly means that, given certain limits, within these we can become what we will. We cannot by willing enlarge our boundaries; we can by willing cultivate and im-

prove our soil. We cannot by willing enlarge our capacities, but only develop them. We cannot by willing create opportunities, but only utilize them and help them arise.

The Essence of Will.

The practical question may naturally arise as to how will acts in developing capacities and using opportunities. The answer is that the essence of will consists in attention to thoughts. We have already had occasion to observe that the will is not an abstract entity separate in existence from the stream of consciousness itself, but that it is the energetic or responsive element in the consciousness itself; further, that there is no will apart from the presence both of ideas and of feelings. Now when the conscious organism by its own will influences its own making and that of its kind, the process is that of attention to ideas. The attention in some cases is involuntary; in critical cases of highest import to man and his future, the attention is voluntary. Exclusive attention to an idea means corresponding conduct. The control of one's thoughts is the secret of all individual attainment. The deeds of conscious men are the expressions in the outward world of the thoughts to which they inwardly consent. Otherwise they are not in a responsible condition, not themselves, though indeed they may be responsible for not being themselves, as a drunken man is irresponsible in conduct, but he is responsible for being drunk.

From Thought to Destiny.

Thoughts then lead to deeds, and deeds through repetition lead to habits, and our habits taken together are our character, and our character leads by cause and effect to our destiny. Character is what we are;

destiny is what we are becoming; it is not fixed for each individual, but is in process of being fixed by himself in relation to his inheritance and his circumstances. The trouble is not in our stars, but in ourselves, if we are total failures; partial failures may be blamed on heredity or circumstance. Where there is no will there is no way, however great the capacity, however inviting the opportunity. Even where there is a will, heredity may have blocked the way. These are the links in the chain of life from simplest beginning in thought to sublimest conclusion or utmost failure in destiny. And we have power over our thoughts.

The Influence of the Lower Stages of Will.

I would not have it appear that all human conduct is traceable to conscious decisions, only the highest and best is so traceable; perhaps the most of human conduct is rooted in such lower stages of will as instinct, impulse, imitation, suggestion, and the like, in which response is indeed present, but not much self-control and self-direction. Our concern here is not so much to show the nature and development of will,[1] as its place in man-making.

Titchener on Attention.

In view of the strategic importance attached to attention in the preceding discussion, let me refer to the judgment of a specialist in this subject. Professor Titchener in his notable contribution writes: "It seems to me that the doctrine of attention is of fundamental importance. And I believe that the strength of Wundt's system lies — and will lie, historically — in the fact of its being an attentional system, whether its special teaching is right or wrong. A system which makes little of attention is, in my

[1] Cf. my "Psychological Principles of Education," Part IV.

judgment, foredoomed to failure."[1] The present discussion is in full agreement with this point of view. But Professor Titchener, in truly scientific fashion, finds the nature of attention to be "sensory clearness," and this mental quality to be itself conditioned by the nervous system. He says, "I will only suggest, then, that the common element which, empirically, holds all the conditions together — the ultimate condition of clearness at large — may be designated as nervous disposition, predisposition of the nervous system and its sensory attachments."[2] Professor Titchener is writing entirely without pedagogical interests and from the parallelistic standpoint that excludes mental causation. I differ from Titchener, first of all, in standpoint, having both pedagogy and idealism at heart. This standpoint does not require me to explain away the nature of attention in its first intent. "Sensory clearness" is to me an effect of attention, not its nature. Attention is a strain in consciousness, not the consciousness of a strain. In voluntary attention, consciousness puts the strain upon itself. It is just here that human destinies hinge.

7. The Practical Bearings of this Discussion:

Our ultimate aim is to find the practical first principles of man-making. To this end we have analyzed heredity, environment, and now will. We want to control these forces, so far as we can, by education, and otherwise, in the interest of present individuals and the future race. In the two preceding chapters

[1] Titchener, "The Psychology of Feeling and Attention," N. Y., 1908, p. 353.

[2] *Op. cit.*, p. 206.

The Education of the Will.

we have seen how education may control heredity and environment through eugenics and eutopias. We have now to inquire how, in Huxley's phrase, we may make "volition count for something as a condition of the course of events." Education can help to make men and women by building good wills. How can this be done?

The Aim in Educating the Will.

In considering the right way to educate the will, first of all the aim must be had in mind. The aim in educating the will is twofold, to socialize it and to effectualize it. Socializing the will makes it right, and effectualizing it makes it capable. Many good people are inefficient, and many efficient people are not good. We need good people who are efficient and efficient people who are good. Education should aim to build the right will and the capable will. As Ruskin says, "Education does not mean teaching people to know what they do not know. It means teaching them to behave as they do not behave."[1]

Socializing the Individual.

It is very common in educational theory to-day to emphasize the socializing of the individual, and, what amounts to the same thing, the adjustment of the individual to his social inheritance from the racial past. This process makes men fit members of present society, and it is necessary to emphasize it.

Individualizing Society.

But we need to recognize that education is the individualizing of society as well as the socializing of the individual. The individualizing of society makes men efficient, as the socializing of the individual makes men good. The individualizing of society makes leaders of society, as the socializing of the

[1] Ruskin, "The Future of England," § 144, in "The Crown of Wild Olive."

individual makes fit members of society. To adjust the individual to society is a stabilizing process, tending to preserve the ancient social institutions; to adjust society to the efficient leader is a process making for progress, tending to increase the social values. For education simply to adjust men to society would be indeed valuable conservation, but for education also to adjust society to the capable individual means progress. It is the business of education to make capable leaders as well as good followers, to make the will efficient as well as right. It is the leaders of the race who have set the pace of progress, — Socrates, Jesus, Paul, Savonarola, Luther.

Principles in Educating the Will.

We must next inquire concerning the principles that are to guide us as we seek by education to socialize individuals, and to individualize society. How shall we educate the will?

The Indirect Education of the Will.

(1) The first education of the will should be indirect, *i.e.*, it should reach the will by action rather than by ideas. The emphasis belongs on action rather than on ideas certainly till adolescence; Aristotle said till thirty. The reason for this is that the emotional and volitional parts of the nature of children predominate over the intellectual, if indeed this be not true throughout life for most people. Adequate foundations must be laid by the indirect methods. Study instincts, learn to recognize their presence, give them proper material upon which to develop, bring them out and direct them aright; it means happiness to children. Study impulses, associating pleasure with the good ones and pain with the bad ones. In life both good and bad things give pleasure at times, and

also pain at times. In young life pleasure and pain are the dominant motives. It is therefore all-important in the moral education of children that parents and teachers indissolubly associate pleasure with good and pain with bad. Even then duties will sometimes be painful and evils pleasurable, owing to human imperfection. The ideal moral character finds its highest pleasure in doing the right and its sharpest pain in doing the wrong. Nothing is more confusing in moral education than to reward evil and punish good. In later years children can be taught that the highest virtue is always its own reward and sometimes involves sacrificing lesser goods.

Aristotle on Moral Education.

In connection with this thought of associating pleasure and pain with good and evil respectively, I cannot do better than transcribe a paragraph from the second book of Aristotle's Ethics, as follows:

"We must take the pleasures and pains that supervene upon our actions as symptoms of our condition. The man who abstains from bodily pleasures and actually enjoys doing so is temperate, while the man who does so but dislikes it is intemperate. The man who faces danger and enjoys it, or at any rate is not pained by it, is brave; but the man who faces it with pain is a coward. For goodness of character has to do with pleasures and pains. It is pleasure that makes us do what is bad, and pain that makes us abstain from what is right. That is why we require to be trained from our earliest youth, as Plato has it, to feel pleasure and pain at the right things. True education is just that."[1]

[1] Burnet, "Aristotle on Education," Cambridge, 1905, pp. 48–49.

Upon this passage the comment of the editor is: "This is the best account of the training of character that has ever been given and should be engraved in the heart of every educator."[1]

In this indirect education provide good models at all times, material and personal, for unconscious and conscious imitation. Children learn more from what we are than from what we say. We teach them more by our deeds than in our creeds. Models.

Fill the mind with uplifting suggestions,[2] with ideas and deeds so deftly presented that the following of them is effortless, while avoiding those suggestions that like poison rankle and spread in the system till all be contaminated. Suggestions that bear fruit touch such subjects as where to go, what to do, how and what to read, what to see and hear, with what and whom to associate, and the like, avoiding the while negative suggestions. Suggestions.

Form the right habits from the outset. Do the deeds one by one that mean the virtues. Only so can the virtues be formed. The virtues are an acquisition; they can be acquired only by doing the very deeds that flow from the virtues. To quote Aristotle again, ". . . it is by doing just acts that we become just, by doing temperate acts that we become temperate, and by doing brave deeds that we become brave."[3] It is neither desirable nor necessary that the basis of habit should be reasoned into before the habits are formed. It is enough in all these efforts at the indirect education of the will that the Habits.

[1] Burnet, "Aristotle on Education," p. 49, note.

[2] Cf. Keatinge, "Suggestion in Education."

[3] *Op. cit.*, p. 45.

questions of children be answered as simply and intelligibly as possible without feeling constrained to raise ethical questionings one's self. Morals are conduct; ethics the science of conduct; morals should precede ethics. He who is moral either understands ethics or can easily come to do so; he whose morals are not yet habits cannot intellectually realize ethics. To teach ethics systematically to children is likely to rub the bloom off of moral issues and to induce that precocity in the deep things of the spirit so disastrous everywhere in later years.

The Use of the Object-Lesson.

(2) Use the object-lesson method in morals. Such instruction is to be occasional, as the suitable object-lesson naturally arises, not systematic. The object-lesson justifies its use in moral as well as in other types of instruction; it is concrete, simple, sensible, obvious, actual. Praise the good act when and where it occurred. Say little about the bad, except as a rare warning. Praise is a great stimulus to children; indifference leaves them indifferent; and blame considerably hinders best work. The atmosphere of pleasure increases efficiency in every line. Perhaps all the virtues may be started through some appropriate object-lesson, if we will but watch for it: sanitation, cleanliness of body, hands, face, teeth, purity of thought, speech, and act, courtesy, honor, chivalry, and respect for age.[1] The happy use of the story in realizing the virtues concretely is closely associated with the object-lesson.

(3) Suggest the power of the will. Particularly if you believe that effort is a variable quantity, and

[1] Cf. J. T. White, "Character-Lessons in American Biography," N. Y., 1909.

not once for all fixed as each occasion for its use arises. Pupils often can, if they only will, and many times they can will. Effort is something to be put forth. You do not know what you can do in a new field till you really try, and try hard, and try long. Practice counts for much in mastery. It is good to believe you can do what it is your duty to do; you will do better for believing in yourself. Auto-suggestion plays a large rôle in success; tell yourself that you can succeed, and make the necessary preparation for doing so. Not that by auto-suggestion we are to blind ourselves to our own limits, but that we may approximate our limits. No one knows in advance of the actual strain what he can really do.[1]

Suggest the Power of Will.

(4) Insist on effort from the beginning. If effort means what our preceding analysis has indicated, that it finally counts in the making of the characters and destinies of people, we are justified in acquainting our children and pupils with effort, even under compulsion, if necessary. Effort is not a popular word in the interest-loving, deterministic, Herbartian traditions in educational theory and practice, but we can never outgrow effort so long as duties sometimes prove disagreeable. It is too ideal for our present world to discard all effort and be what one's pleasures allow. Children must be restrained and commanded as well as enticed. To do otherwise is to follow blindly the deep intimations of "the century of the child,"[2] and put children over parents and parents under children.

Insist on Effort.

[1] Cf. James, "The Powers of Men," *American Magazine*, Nov., 1907; and Payot, "The Education of the Will," N. Y., 1909.

[2] Cf. Miss Key, "The Education of the Child," N. Y., 1910.

Effort and Pleasure not Inconsistent.

Even the kindergarten is none too early for initial efforts, in order both to achieve and to refrain. There is no accomplishment and no self-control without effort. Schools must indeed be as pleasurable as we can make them, but highest pleasures result from mastering difficulties. To do as one pleases gives indeed a selfish pleasure, but to do as one ought, even at the cost of effort and the sacrifice of lesser goods, gives worthy pleasure. Even if we want homes and schools to be pleasurable, they must be places of effortful wrestling. Children may do what they want to do so long as what they want to do is right, but it will sometimes be right for them to do what they do not want to do; then they must. In the rearing of children it is fatal to dispense with the "must"; if you will recollect the cases where it was tried you will agree with me, beginning perhaps with Émile. Nor will even adults ever outgrow entirely effort and duty; by great drops of sweat as of blood must they at times save themselves and others. Perhaps we, on first thought at least, should not have made costly effort a precondition of worthy character, but this is the unalterable constitution of things as we find them. Tasks then must be assigned and done, without the sense of effort, if indeed the children so love their duties, but with it, if necessary. A critic of Eliot's "five-foot shelf of books" remarked: "A weary task for aspiring youth"; to which another replied: "If aspiring youth is not ready for weary tasks, it had better stop aspiring."

Right Discipline.

(5) Right discipline. If you have children that are well born and are placed in appropriate surround-

ings, it is easy to manage them, if you know how, and are born with a will of your own. The secret in managing children in home and school is to know exactly what you want; that this thing should be right in itself; that you should make it very plain to the children; that you should be gentle but firm, consistent, and insistent; that finally, in case of need, you show and even use power. Perhaps in the school it is not necessary that the "power" make use of the rod; in the home, with most children, physical force of some kind will be necessary. Those who were themselves so fortunate as to be raised in this way will know how well it works in securing the indispensable virtue of obedience among children. Right discipline is for the good of the individual concerned primarily; for the good of others secondarily. Historically we have homes and schools because of children, not children because of homes and schools. The child brought the institutions into being. They exist for him. But they exist for him in his ideal, universal, rational, potential selfhood, not in his unorganized, whimsical, capricious, and chaotic individuality, except indeed to bring order by right training out of such chaos. We are enthroning children to-day, not in the name of what they are, but in the name of what by right treatment they may become and may enable the race to become. The children are our hope.

The Curriculum.

(6) The curriculum. The purpose of any subject in the curriculum is, first, to acquaint pupils with some set of naturalistic or social facts, and, second, to give some ideas rightly regulative of conduct. It

is the second purpose of any subject in the curriculum that we have in mind here. Any subject serves the first purpose, but subjects serve unequally the second purpose. The subjects that serve it best are naturally the social, in distinction from the naturalistic. History, for example, is, from one standpoint at least, a series of vast experiments in living. Through its study we may learn the ways of failure and of success. Nations, as a rule, have shown us the ways of failure; some individuals the ways of success. Thus through history, in addition to the facts, one may learn what he may safely imitate, and what he must reject. Also nations may learn the broad ways of failure and the narrow way of success. Biographies and autobiographies quicken our admiration, arouse our sympathy, stir our indignation, stimulate our ambition. History primarily is a record of the doings of man, but secondarily it is moral philosophy teaching by example. The practical influence of the study of history touches the will particularly.[1]

History.

Literature.

Literature is a product mainly of the emotions and the imagination. Since the emotions and the will are so intimately related, the study of literature also helps to form the character. In literature we see types and ideals, not actual occurrences. Fiction is less strange than truth because it represents the universal, not the individual, human nature. Poetry is truer than history, in the sense that it expresses the feelings of man, not of men; it is general, not local. For these

[1] Cf. Bourne, "The Teaching of History and Civics," N. Y., 1902. Keatinge, M. W., "Studies in the Teaching of History," London, 1910. Lamprecht, "What is History?" N. Y., 1905.

very reasons literature exerts a beneficial influence on character, revealing human nature in its broad outlines and in its ideality. To compass in one's appreciation the characters in literature and the sentiments of the poets is to enlarge one's personality to truly human dimensions. To exclude literature and think only the thoughts of the moment, suggested only by the prosaic routine of earning one's living, is to drop below the line of human privilege and become but little above the creatures whose eyes see only the earth.

Manual Training and Drawing.

Of the subjects requiring the use of the body and bearing on the development of character, let me refer particularly to manual training and drawing. In these subjects the ideas of honesty and accuracy are realized in concrete instances; likewise the value of these attainments. Perhaps the habits of honesty and accuracy in expressing one's self in material ways are formed, though such habits may not take possession of other ways of self-expression. Best of all, perhaps, students fall in love with the ideas of honesty and accuracy, making of them ideals, and as such finding them universally regulative. People who deal exclusively with words, such as language-students and philologists, tend to become unreal and unpractical persons; on the other hand, people who handle things, and who, though grown, still play, are very real, life-like, and human personalities.

To the Herbartians we are indebted for the insight that every subject studied can and should influence moral character, but we must leave to the reader at this point the task of applying his own subject, whatever it be, to the building of the will.

Direct Ethical Instruction.

Its Weakness.

(7) Direct ethical instruction. In our country, where the truths of religion cannot be taught systematically in the public schools, for good and sufficient reasons, as we think, it is the more important that ethics be taught. But this recommendation is no simple matter. The fact that we are discussing it so late in this series shows it is not the thing to begin with in developing character. Furthermore, we cannot rely upon it implicitly; if pupils have been rightly trained before studying ethics, they will hardly need ethics to make them do right; on the other hand, if pupils are not good, ethics will hardly make them so. The fact is that ethics is a science; it reaches the intellect, but the springs of character are the emotions and the will. If ethics degenerates into exhortation, the net is being spread in the sight of the bird; Christianity has discovered how hard it is to reform the world by preaching. France has been teaching ethics in its schools for a generation, with the avowed purpose of thereby forming the moral character, but crime has continued to increase and the birth-rate has continued to decrease, while one French teacher was able to report in answer to a question concerning the influence of ethics on character, "My best scholar in ethics is the greatest knave in the lot." The world is filled with people who know what is right and do what is wrong. The ignorant may be vicious on a small scale; the knowing are wicked on a vast scale. The ignorant harbor the vices that destroy the individual; the knowing the sins that destroy society. The brutish man attacks your person directly; the cunning man attacks you indirectly by preying on the social structure. It is

not enough that men shall know what is right; they must also will to do it. Ethics gives the former; it does not always give the latter.

Its Strength.

Why then teach ethics? Because, though knowledge does not insure right action, there can be no right action without knowledge. Because, too, knowing the right, through the motor-tendency of ideas, is at least a temptation to do it. That man is actively bad, morally depraved, who sins against the light he has. Ethics turns the light on; it cannot make men prefer darkness to light.

Professor Palmer's Position.

Professor Palmer, a life-time college teacher of ethics, is our best critic of direct ethical instruction.[1] He taught me to disagree with him. I cannot go all the way with him in his rejection of ethical instruction below the college; firstly, because of that characteristic of the teacher he himself has both exemplified and described, viz., the ability to transmute ideas into life; secondly, because the doubting period of adolescence demands some systematic enlightenment; thirdly, the high school, as the people's college, must do what it can for the people's morals.

How Ethics should be Taught.

As already suggested in discussing the object-lesson in morals, a bit of ethical instruction may be given at appropriate occasions as they arise anywhere, in the home, on the street, in the school. Particularly may an elective course be given in the senior year of the high school. By this time pupils have some habits of right conduct, some experience

[1] Palmer, G. H., "The Teacher," Boston, 1908. "Ethical and Moral Instruction in Schools," Boston, 1909.

of conscience, and some feelings of duty. This is the concrete material to use. The familiar social situations give opportunity for applying new ethical insights. Ethics should be taught in closest relation to the moral situations in life; any resolutions formed should straightway act themselves out, not be stored for future reference. One teacher of ethics to adolescents I know is heartily committed to the idea of direct ethical instruction. It is a difficult feat to tell young people what they ought to do and why they ought to do it, in such a way that they "receive with meekness the engrafted word," and, as in so many other instances, the worth of the issue depends on who the teacher is. In any case he will do well to heed, and to admonish his pupils to heed, the words of Clough:

> "Play no tricks upon thy soul, O Man,
> Let fact be fact and life the thing it can."

Allow Choices.

(8) Allow choices. If choice plays the determining rôle in character-formation we have assigned it, young people should be allowed to make choices for themselves. Of course, older people usually know better, but many young people do not think so; older people would save their children and pupils from foolish choices; in order to do so, they practically exclude choice from the lives of their charges. This is a mistake. Beginning with tender years, children should be allowed to choose for themselves in some matters, under parental advice, but not under parental compulsion. It trains in the sense of responsibility and in self-control. Neither

home nor school should assume all responsibility for children. To a degree they should be permitted to rely upon themselves. Children really enjoy little responsibilities and being trusted to do important things. The private boarding-school, keeping boys or girls day and night, and usually under supervision, is in particular danger of breeding irresponsibility. Important matters in which children and young people should be allowed some freedom of choice are, how to apportion one's time, how to spend one's earnings, what studies to pursue, how to show friendship for one's associates, etc. The spontaneous interests of children, their real preferences, may well be allowed free play for development, so long as the rights of others are not infringed.

Never Break a Child's Will.

This brings me to the particular matter of "breaking a child's will." This usually means compelling him to follow the parent's choice rather than his own. It is better not to join this issue, not to conquer a child. Anticipate the issue; if the matter be important, decide it yourself in advance before allowing the child to reach or state his decision; if the matter is not over-important, leave him to decide for himself, even at some risk. If in an important matter the child's will is fixed, do not so much cross as circumvent him. Children raised in abject submission to parents become tyrants as adults; those whose wills were never broken, whose spirits were never crushed within them, make forceful and resolute characters. If you would make weak and irresolute men and women, break their wills as children.

There are many things about educating wills that

we must leave to the literature at the end of this chapter to discuss. Perhaps enough has been said to prove that wills help to make men and women, that these wills are fashionable by education during the susceptible years, that they are ever subject to self-culture, and that, in the last analysis, we are worthy or unworthy characters, not according to our gifts, or to our circumstances, but according to our wills. Our talents may be five, two, or one; this is heredity; the market-place is there in the environment for all alike; our reward or condemnation depends on the use we will to make of our talents.

The Third Principle of Man-Making.

We have found the individual will to be the third of the great trio of forces that make men and women. This on the theoretical side. On the practical side, we have already seen how education can possess itself of the influence of heredity, in eugenics; also how education can possess itself of the influence of environment, in eutopias. We have just seen how education can form the will. This result gives us the third of the first principles in the making of men and women, which we may name, borrowing a Greek word, *eunoias: make the will good.* The good will is right in its motivation and efficient in its execution. And, as Kant said, it is the only thing of absolute value in this world.

Summary of the Elements of Man-Making.

In brief, at this point we may summarize the elements of man-making as follows: Heredity bestows capacity, unchangeable in the individual, but subject to improvement in the race by the right selection of life-partners. Environment provides opportunity. Will by effort realizes the inherited capacity and

utilizes the environing opportunity. If we think of the unconceived generation, it is fitting to emphasize heredity; if we think of the children of to-day, it is fitting to emphasize environment; if we think of adolescents and adults, it is fitting to emphasize will.

A Problem: Can these Elements be Reduced in Number?

Is it possible to reduce to two or even to one these elements of man-making? If our implications concerning effort be accepted, it is impossible to eliminate will. By making the living cell a product of inanimate forces, some have reduced heredity to environment; but the best biological opinion to-day seems to know no origin of the cell but the cell, giving a kind of past immortality to cell-life, and retaining heredity as a primary factor in the making of organisms. Others, by denying the permanent influence of environment on the later generations, allowing only its temporary influence on the passing generation, that is, by denying the inheritance of acquired characters, have minimized environment and magnified heredity; but again the best present biological opinion seems to allow that the effects of use and disuse are passed on to the later generations, though the specific modifications are not, thus retaining environment as a permanent factor in producing living creatures. On the basis of science, therefore, we are hardly able to eliminate either heredity or environment. Whether in our last chapter these irreducible three can be considered as elements in one synthetic whole remains to be seen.

Another problem: The most Influential Element?

Which of the three is most influential? Where each appears as essential, the answer is most difficult and perhaps not important. Without heredity, no beginning; without environment, no continuing;

without will, no individuality. The lower organisms have little individuality; with them heredity and environment explain most. With man individuality is striking; will is prominent, but can only in part explain him. I am inclined to attach most importance to heredity and least to will; but the importance I attach to will is crucial, particularly as regards what will can do in shaping future heredity by eugenics.

The Rôle of the School in Race-Building.

The school is our most usable institution in race-building, but it has not been much used. It receives children coming with all kinds of heredity and from all kinds of environment. But protoplasm is unstable, and the nervous system of the young is plastic. The work of the school in building a better race of men and women is, first, to give instruction in, and to illustrate in the examples of school officers and teachers, the principles of eugenics; second, to provide the best possible environment in which children may learn and grow, — in short, eutopias; and third, to cultivate good wills, ready to follow true leaders or lead distressed followers, — in short, eunoias.

We have now considered the phenomenal elements entering into the constitution of human nature, that is, the factors that appear to us as heredity, environment, and will. These forces make men and women. But some one of a reflective turn of mind will say, Does not God make men and women? Are not these three but secondary causes after all? Is not God the primary cause? Where does God come into the process of man-making? These are philosophical questions that would penetrate below seemings to reality. For their answer we must turn to our last chapter.

But in accord with our general point of view hitherto, we must expect to find that God comes in, not by way of exception, but everywhere; and we shall find Him where we are, or not at all.

REFERENCES ON CHAPTER IV

Arnold, F., School and Class Management, Chap. XII, N. Y., 1908.

Bagley, W. C., The Educative Process, Chap. III, N. Y., 1908.

Bain, A., Education as a Science, London, 1889, Chap. XII.

Barnett, P. A., Common Sense in Education and Teaching, N. Y., 1899, Chap. II.

Calderwood, H., On Teaching, Chaps. IV and V, 4th Ed., London, 1885.

Chamberlain, A. H., Standards in Education, Chap. V, N. Y., 1908.

Coe, G. A., Education in Religion and Morals, N. Y., 1904.

Compayré, G., Psychology applied to Education, Chaps. XI–XV, Boston, 1899.

—— Lectures on Pedagogy, Chap. X, Boston, 1890.

Conover, J. P., Personality in Education, N. Y., 1908.

Cope, E. D., The Origin of the Fittest, Chap. XXI, N. Y., 1887.

Dewey, J., Moral Principles in Education, N. Y., 1909.

Dewey and Tufts, Ethics, Chaps. XVI and XVII, N.Y., 1908.

Dexter and Garlick, Psychology in the Schoolroom, Chap. XXIII, N. Y., 1901.

Dutton and Snedden, Administration of Public Education in the U. S., Chap. XXVIII, N. Y., 1908.

Fitch, J., Lectures on Teaching, pp. 429 ff., N. Y., 1885.

Horne, H. H., The Psychological Principles of Education, Part IV, N. Y., 1906.

Howland, G., Practical Hints for Teachers, Chaps. V and VI, N. Y., 1889.

James, W., Talks to Teachers, Chap. XV, N. Y., 1899.

Jenks, J. W., Citizenship and the Schools, N. Y., 1906.

Johonnot, J., Principles and Practice of Teaching, Chap. XIII, N. Y., 1896.

KIRKPATRICK, E. A., Fundamentals of Child Study, Chap. XVI, N. Y., 1903.

LAURIE, S. S., Institutes of Education, 4th Part, N. Y., 1909.

MACCUNN, J., The Making of Character, N. Y., 1900.

PALMER, G. H., Ethical and Moral Instruction in Schools, N. Y., 1909.

PALMER, G. H., The Teacher, II and III, Boston, 1908.

PARKER, F. W., Talks on Pedagogics, Chap. XIV, Chicago, 1894.

Problems of Secondary Education, Northwestern Univ., pp. 144–182.

PAYOT, J., The Education of the Will, N. Y., 1909.

RUGH, C. E., and others, Moral Training in the Public Schools, N. Y., 1908.

SADLER, M. E., Moral Instruction and Training in Schools, London, 1908.

SCOTT, C. A., Social Education, Chap. XII, Boston, 1908.

SEELEY, L., A New School Management, Appendix, N. Y., 1903.

SPENCER, H., Education, IV, N. Y., 1900.

SULLY, J., Teachers' Handbook of Psychology, Chap. XX.

SWIFT, E. J., "Man's Educational Reconstruction of Nature," *Popular Science Monthly*, March, 1908.

CHAPTER V

THE PHILOSOPHY OF MAN-MAKING

1. The Nature of Philosophy.

PHILOSOPHY means a larger and unproven view of facts. In the preceding pages we have been concerned at some length with facts. Many readers will not care to go beyond the factual view. But man has imagination, faith, appreciation, and vision, as well as observation, explanation, generalization, and application. The former set of endowments give us poetry, religion, and philosophy; the latter, science and history. If possible, we ought to see our subject, education in man-making, in terms of philosophy as well as in terms of science.

The Method of Philosophy.

Philosophy tries to see all the facts in their unity and implication. It would read the matter in hand in terms of its meaning. Facts are a kind of language, the language of concrete realities, used by the universe in its processes of unfoldment and self-realization. Just as the old Babylonians used their cuneiform, or wedge-shaped, symbols to express their thoughts, so we may suppose the universe itself uses facts to express meanings. Facts at bottom are Nature's symbols of inner meanings. Now science studies the symbols themselves, and philosophy studies their meanings. The problem of philosophy is to read truly the universal meaning of facts, and the method of philosophy is guessing with reason. Through the discovery of the

Rosetta stone, with the same meaning expressed in both Greek, which they knew, and the Egyptian hieroglyphs, which they wanted to know, philologists deciphered the meaning of the hieroglyphs. It is possible that mind, which we know, and matter, which we do not know, are two languages expressing the same meaning, and that what Greek was to the philologists mind is to the philosophers. At any rate, matter to us is symbolic of meanings we do not fully grasp, while mind to us is meaning itself. But to be a philosopher one must have good reason to make the guess he does concerning the inner secrets of Nature.

2. Philosophies Many.

The perplexing thing is that the philosophers make such different guesses. Not agreeing that in their own minds they have the clue to the meaning of the facts of Nature, they try other clues, which work in each case with some degree of success. Whereupon it does not occur to all the philosophers to observe that any reasonable guess partly succeeds because of the element of reason in it, and if they would use reason itself as the ultimate explanatory principle, perhaps they might succeed best of all. The Etruscan dialect has long baffled the efforts of the classical philologists to read it; many solutions have been proposed; in this case no parallel translation in a known tongue has been discovered; each reasonable guess has made clear some passages; the best guess, when it comes, will make clear the most passages in the easiest manner. So, in the absence of the known translation, philosophers have sought many clues to the riddle of existence, with varying successes. But

they have always, knowingly or unknowingly, used their own minds in applying their solution ; they have guessed not blindly but with reason.

Some have guessed that facts are facts and nothing more, that they convey no meaning whatsoever, that they are blind brute facts. This is the guess of the materialists. The trouble with this guess is that man himself is a fact, and in his own case he knows that some meaning exists. It is too much, therefore, to find the meaning of existence by denying that it has any. Materialism.

Others have guessed that the meaning is unguessable. Meaning there must be, of some sort, they say, since we find it in ourselves, but what the meaning is, in part and whole, we cannot truly suppose. It is there, but we cannot know it. These are the agnostics. The trouble with this guess is, it asserts by implication what it denies. It denies that the meaning is guessable, but it asserts that it has truly guessed its character as unguessable. Whereas, of course, if the riddles of the world were truly unguessable, we could not so much as guess they were so. To know the unknowable is inconsistent ; even to know that it is unknowable is to know all there is to know about it. The agnostics may truly know they do not know, but they cannot know that the meaning of the world is unknowable. This would be a very exalted form of gnosticism. Agnosticism.

Others have guessed that some facts have meaning and some have none, that the mental facts have meaning, but the material facts have none. These are the dualists, asserting meaning wherever there is Dualism.

mind, but finding matter opaque to meaning and to mind. The trouble with this guess is that half the facts remain unread. Blinded by the light of mind, they see only darkness in matter. The best guess will read all the facts in the easiest manner.

Pluralism.

Still others have guessed that the meanings are many and the no-meanings are many, and the whole is disconnected and fragmentary. No unitary story is being told, but the universe is like a badly bound magazine in several languages, with some pages misplaced and some missing. This is the guess of the pluralists. It perhaps has least of ordering reason in it, finding most of disordered chaos in our world of experience. It is also one of the guesses of the childhood of the race when there were gods, many warring at cross-purposes with each other.

Parallelism.

A nineteenth-century guess was that the meanings and no-meanings were equal in number, correspondent to each other, and parallel in character. Wherever there is mind there is matter, and wherever there is matter there also is mind, but these two have no dealings with each other. The psychical series does not affect the physical series, nor the physical series the psychical series, but the parallelism is universal. These are the parallelists. The trouble with this guess is that it denies relations between things that seem most intimately related. John Stuart Mill teaches us to hold as causally related two things that vary concomitantly with each other, as parallelism says the psychical and physical series do. Then, too, parallelism seems to be clearer in denying the fact of interrelation than in asserting its positive position.

Idealism.

We cannot review guesses of secondary importance; the above represent the main guesses, together with the following one. There is but one vast meaning running through all the facts of existence, like the mind through the body. Mental facts are both facts and meanings, while physical facts also have their mental meanings. As all Nature fills one space and all events one time, so all existence is one unity "whose body Nature is, and God the Soul." This is the guess of the idealists. In no fact is meaning absent, nor is it unknown entirely to us who know our significant selves, nor is it absent from half existence, nor is it confused in itself, nor is it the counterpart of a no-meaning. It appears fragmentary to us because we see in part, but the whole nevertheless is there giving significance to the parts. The trouble with this guess is that it is not demonstrable. It reads all the facts and in a very simple way, but you cannot prove that the guess is correct. This is of course because the philosopher is not himself the whole meaning. From the nature of the case the guess of the part concerning the whole is not verifiable. Because it seems to have most reason in it, we adopt this last guess of idealism.

Now the question is, how shall we read the facts of man-making? What meaning do they yield? It is not our plan to read idealism into the facts, but, if we can, to read the true meaning out of the facts.

3. How Mankind is getting on.

Before attempting to formulate a philosophy of man-making we ought to take stock as to how man is progressing. On the whole there is no ground for

discouragement. But it takes the view of a wide sweep of time to assure us of this. Historic time is very short in comparison with even that past time which has affected man; no final conclusions for or against man's progress in mental endowment can be drawn from the moment of time we know as recorded history. We may in fact entertain grave doubt about the increase of mental capacity during historic time. Our view of man's progress must include also the scope of prehistoric time, the length of which we cannot adequately conceive. Some geologists have estimated by measuring the present rate of recession that Niagara Falls have been thirty-nine thousand years in making the seven-mile gorge. Allowing the immense stretches of prehistoric time to come into our view, and comparing the modern man with his primitive forbears, all doubt as to his progress in mental capacity vanishes. And this progress was made by "natural selection," without any comprehension on man's part of the end from the beginning, and without his conscious coöperation in this large way. If such progress was made in man's ignorance, it staggers and exalts us to conceive what progress may be made by the aid of man's knowledge and use of the creative forces.

Progress in Capacity *vs.* Progress in Acquisition.

We distinguish between capacity and acquisition. While capacity has increased during all past time, we cannot trace its increase during historic past time; this does not discourage the thought of its increase in future time, for the simple reason that in historic time no conscious effort has been made to increase man's capacity, and conscious effort works wonders

in comparatively short intervals. But there has been progress in acquisition within historic time. This is because man's acquisition in religion, literature, art, science, and history is transmitted by social heredity, so that each generation receives all the past achievements, adds to them, and passes all on. Thus during historic time progress has been rather through social than physiological heredity. Physiological heredity, unlike social heredity, cannot transmit individual acquisitions, but only those inherent variations arising in the union of two germ cells; this union hitherto in man's case has never been consciously directed toward improving racial capacity, though man has directed the union for improving animals and plants.

Material Progress.

Concerning the lines of progress in acquisition during historic time some doubt has been expressed.[1] The one clear line of progress to Bryce is the material. We shall easily admit this if we think of the steam-engine, the telegraph, the sewing-machine, the cotton-gin, the cablegraph, the telephone, wireless telegraphy, the steel war-vessel, the submarine craft, the airship, huge fortunes, etc., remembering that very few of man's past arts and inventions have been lost to the world. The fact is, the material luxuries of one generation become the necessities of the next.

Intellectual Progress.

Concerning intellectual progress, that is, the advance of knowledge, there can be no reasonable doubt. It is really a pre-condition of material progress, for material progress is due to the application of hard-won knowledge. The modern world particularly has

[1] Cf. Bryce, "What is Progress?" *Atlantic Monthly*, 100, pp. 145–156.

followed the trumpet-call of Bacon to master Nature by understanding her. Illustrations of the advancement of learning within historic time would be the transitions from astrology to modern astronomy, from alchemy to modern chemistry, from phrenology to physiological psychology. The reduction to plane and topographical maps of the surface of our planet; the classification of the races of men; the story of the earth's history; physiology; the conquest of disease, etc.; other equally noted illustrations will occur to the reader. This progress in knowledge has taken place by the joint use of the *a priori* and *a posteriori* methods.

Æsthetic Progress.

Concerning progress in æsthetic acquisition, we may have no doubt if we contrast the art of primitive and modern man in drawing, music, the crafts, song, building, carving, painting, and decorating. The primitive man may have had the æsthetic capacities of such late products as Myron, Virgil, Angelo, da Vinci, and Beethoven; we cannot disprove it; but he certainly lacked their development and productivity. Æsthetic arts in which primitive peoples may have excelled moderns are story-telling and myth-making. It is interesting to note that progress in art has not been so continuous as progress in knowledge, different periods having excelled in particular artistic achievements, as the primitive period in epic narration, the Egyptian in mammoth construction, the Greek in statuary, the mediæval in aspiring architecture, the Renaissance in painting, and the modern in music. Other arts have perhaps equally flourished at different periods, *e.g.* comedy and tragedy during

the Greek and Renaissance periods. These facts indicate that art is more dependent upon the individual genius and is less communicable to the rank and file than knowledge. In discussing progress in art it is common to contrast the Greek and modern periods to the detriment of the latter; but the historic perspective is entirely too short to show anything concerning the loss of artistic capacity; as for artistic productions, about all that can be said is, we cannot repeat their excellence in marble, and they did not achieve our excellence in music; these are differences, but hardly grounds for odious comparisons.

Moral Progress.

As for moral progress, make the time-sweep broad enough, and you are sure of it. The primitive code of morals is, love your friends, those of your clan, and hate your enemies, those of all other clans. The unit is social, not individual. In modern times we have the theory, and sometimes the practice, love your enemies. The unit is here individual as well as social. In fact, progress in morality has been rather for the individual than for the nation. The average moral standard of the individuals of a nation surpasses that of the nation acting as a nation. Nations will still in primitive fashion fight out their differences, though individuals will sometimes arbitrate. There has been moral progress too in recognizing, theoretically at least, the unity of mankind, the consequent anachronism of warfare, and the consequent rise of demands for an international tribunal of arbitration. This world-movement toward unity[1] is

[1] Cf. Tucker, W. J., "The New Movement of Humanity." Roosevelt, T., "The World Movement," *Outlook*, May 14, 1910.

slowly in process, is a tremendous moral gain, and is being rapidly forwarded by modern facilities for transportation and communication. Also there has come to be greater consideration for women and children as human beings with rights and privileges as well as duties. The modern moral sense rebels against the state exposure of weak or female infants, against child-wives, harems, and Mormonism. There has been at the same time a growth in humaneness, leading to the establishment of hospitals and asylums and to the separation of the insane and the criminal. This spirit of fellow-feeling has passed on to the animals; we try to prevent cruelty to animals as well as to children; we study and heal the diseases of the domestic animals. In so far as the "anti-vivisection" movement is a witness to sympathy for animals, it is good; in so far as, by saving the dogs, it would in ignorance of their diseases sacrifice the children, it is short-sighted. The widening of fellow-feeling to include the animals is associated with the modern interest in animal habits, intelligence, and life. When we test moral progress by violations of the moral law, that is, one's sense of right, there is no telling whether the race has progressed morally or not. If we subject savages and barbarians to our code of morals, there has evidently been progress. A modern man subjected to their code would not be a "good" clansman. In view of the many artificial as well as the natural penalties in primitive life, it is probable that savages do as nearly, if not more nearly, what is right to them as do the civilized. Moral progress has consisted rather in substituting one code for an-

other than in following the code one has. On the latter basis, "Crump, with all his devils," would probably be the better man. The moral sense, viz., that there is a right, seems to characterize man as man; what that right is depends on education, in the broad sense of the term.[1]

Humanity and Race-Prejudice.

Parallel to the uniting of humanity in sympathy has gone the disuniting of humanity in races. Thus on the one hand we have human sympathy and on the other hand race-prejudice. These interests sometimes clash. The solution of the conflict will hardly be the elimination of either human sympathy or race-prejudice, but a division of the field, and this in the interest of mankind. Sympathy is fellow-feeling between man and man, it is a human bond, and may well unite all men with each other. Race-prejudice means the refusal to intermarry and mix breeds, which is so destructive to race-loyalty. Race-prejudice in this form protects us against loss of racial individuality, while human sympathy should insure to each man his best chance.

Religious Progress.

How about religious progress? The question is very difficult, because people are less agreed about religion than about anything except philosophy. But the exception is a minor one, because religion and philosophy are so closely related and because there are so few conscious philosophers. The question is very closely related to the preceding one on moral progress, the two lines running along together, and the greatest gains in religion resulting from the improving moral code.

[1] On moral progress, cf. Dewey and Tufts, *Ethics*, Part I, N. Y., 1908.

Monotheism.

First of all, parallel to, and perhaps consequent upon, the growth in the sense of the unity of mankind has come the gradual unification of deity. The steps in the progress are, perhaps, naturism, the worship of natural objects, as fire and water, as living; animism, the worship of the spirits supposed to reside in such natural objects, as Agni and Indra; polytheism, the worship of many mutually independent deities, separable from objects; henotheism, the worship of each of several gods for the time being as the sole god; finally, monotheism, the worship of one god. This progress toward unity in religion is paralleled by the scientific progress toward the conception of unity in Nature, as well as by the moral progress toward unity in man.

The Moralization of Deity.

Further, there has been progress in the moralization of deity. Religion began independently of morality, perhaps in the desire of man to propitiate the living forces in his environment, which sometimes he feared, which however he must control to succeed. Religion is man's instrument of adjustment to the unseen, as science has come to be his instrument of adjustment to the seen. Man pictured these deities in his own moral image, subject to caprice, passions, anger, and revenge. As man's moral stature grew, so also did his god's, until the complete moralization of deity took place, as in such an utterance as, "Shall not the Judge of all the earth do right?" [1]

Progress in Religious Feeling.

These two lines of progress are in the theological element of religion. On the emotional side there has been progress from such states of feeling as

[1] Gen. 18 : 25.

terror, fear, hatred, suspicion, subjection, to awe, reverence, love, trust, and humility. Both religion and science have agreed in eliminating all fear, except of broken law.

Progress in Religious Worship.

On the practical side in religion men bring now to their worship not the fruit of the field, nor animals to the sacrifice, nor the fruit of their own bodies, as acts of propitiation, but themselves in consecration to noble ends. The gift of money without the giver is bare. Men have ceased, in theory at least, Jacob-like, to bargain with Jehovah. The sacrifice to God is now the devoted life.

Progress in Religious Toleration.

Withal, too, there has been progress in religious toleration. This has rested mainly upon progress in the knowledge of religions. Men found elements of similarity in all religions, that the essential genius of religion is one, that the distinction is not between revealed and non-revealed religions, but between lower and higher revelations, that the measure of the revelation is not so much the Spirit of God as the incapacity of man. Religious conquest by the sword is in disfavor. The fires of the Inquisition are out, the torturous racks of religious persecution are preserved in historic museums. No one man, no one church, no one religion, has grasped all the infinite truth of God; hence religious toleration is a necessity. The phenomenon of the study of comparative religion is a witness to religious progress in toleration.

Missions.

The higher religions have, as a rule, and later, if not sooner, considered their privilege also an obligation. The wonderful nineteenth century, the

century of unification, saw the launching of great Christian missionary enterprises. Their animating motive at first was narrow, to save the souls of the heathen from hell through the only efficacious plan of salvation; it was a narrow theological motive. The spirit of missions shifted rapidly, as things go in this world, to the use of such additional agencies as the school, the hospital, and the social settlement. The motive shifted from the theological to the educational. To-day among the best fruits of Christian missions is the general awakening of the East which its whole communication with the West has accomplished. Christian nations are most unchristian in quelling by violence the rise of the spirit of individuality and nationalism in Oriental countries; these very things it is our western mission to teach, not to destroy.

Decline in the Social Influence of Religion.

Along with these several lines of religious progress must be remarked one line of religious decline; there is a decline in advancing civilization in the extent of the social influence of religion. I do not say that this decline is necessary; it probably depends upon the character of the religion; but it is an observable fact. Primitive life is entirely dominated by religion; the medicine man, the shaman, the priest, are the most influential men of the tribe; the religious sanctions and taboos compass the whole life all the days. Even in the Greek days religion permeated life in a way unknown to-day; the great Olympian and other games were religious festivals, and the Greek tragedy originated in religious rites. Something similar in the extent of the social influence of religion is seen in the

mediæval days, when the church as an institution was the dominating influence of the whole life, political, social, scientific, and æsthetic. All the Oriental nations are still supremely shaped by their religions, except Japan. In the modern West the story is different. The minister is not the leading figure in his community he once was, and the church does not influence all the life as it once did. Many people are born, marry, raise families, and die without relationship to the church.

Its Explanation.

There are several sources of explanation for the fact that modern society is not influenced by religion as it once was, such as the rise of the modern democratic state as the seat of political power, the rise of the public press as moulding public opinion, the rise of the critical spirit, the growth of the sense of individuality, the spread of higher education among the pews, the rivalry of the denominational sects, the progress of modern knowledge, the conservatism of theology, the growing social and financial attractions of other professions, the consequent relative decline in ministerial ability, and other similar things. The fundamental thing is that the church as a whole has not kept pace with the spiritual needs of modern life, with the result that modern life flows by instead of, as it once did, through the church.

The Problem of the Church.

This gives the church its crucial problem to-day, the problem of regaining its social constructive influence, of expanding its ministry to compass the needs and interests of modern life. The genius of religion is sufficiently versatile and adjustable to allow this; whether the catholicity and zeal of the church is suffi-

cient to achieve it remains to be seen. Many signs to-day indicate that religion will rise to meet its social crisis.[1]

No Racial Degeneration.

Progress in racial acquisitions is slow enough, progress in racial capacity is much slower. Looking at the race as a whole, to-day, its vital symptoms are distinctly good. There are no signs of rapid decline anywhere. The racial poisons, such as alcohol and syphilis, are indeed playing havoc among those affected and their descendants. The non-inheritance of acquired characters is marvellously protecting the race from the vices of many of its members. The plagues that scourge humanity are rapidly yielding to science and skill, and prophylaxis is opening a new era of racial health. The relatively declining birth-rate in most civilized societies is due more to choice than to impotency, and in so far as it evinces foresight rather than the rejection of the duties of parenthood is commendable. The declining death-rate among infants and children has increased the mean duration of life in the last half century some ten or twelve years, though the hopes of Metchnikoff for the prolongation of life beyond a hundred years in full possession of all faculties are probably fatuous.

The American Situation.

We have seen previously that there are many and serious menaces to American society. But on the whole the American stock does not yet show evidences of decline. Americans do not seem to be losing height or lung capacity. There has been no marked increase in insanity yet from American nervousness. Criminality is perhaps only apparently increasing,

[1] Cf. Rauschenbusch, "Christianity and the Social Crisis," N. Y., 1908.

because of its increased detection, the increasing number of laws against it, and the improved records. Children are not born old, though the absence of playgrounds and early labor make them prematurely so. Almost half our population is now urban, and it is learning to survive so. The immigrant is sometimes a bad citizen from the outset, and often is made so the first few days after his arrival, but in most cases he loves and wants liberty and eagerly assimilates American ideals. The divorce evil is indeed shameful, but it is notorious not among the masses of the people, but among the idle rich whose ancestors knew how to make money better than their descendants know how to spend it. The fact is, we have not learned yet in any of its bearings that matrimony contemplates the benefit of the race rather than the pleasure of the individual. The most ominous cloud on the American horizon is our mammoth industrial system, which has not been assimilated by the true ends of living, life, liberty, truth, beauty, virtue, happiness, but has instead been rapidly assimilating all these in its monstrous maw. Even this system, however, has given us great wealth, whose philanthropic uses in combating the evils the system has itself helped to produce we are just learning.

Need of Vital Conservation.

With all these signs of promise for the American race, there are still many elemental things we need to learn about eating and drinking, breathing and sleeping, dressing and walking, marrying and giving in marriage, and the provision of the right conditions of living. The modern rainbow of promise is the adjustment of our intense individualism to the idea of

social intervention for the good of the race. However much it hurts the monopolistic capitalist, the state is beginning to conserve its material resources. But the only true wealth is life, in relation to which other things become costly or cheap, and though it may hurt our individualism, and sense of the parental ownership of children, the state is beginning to conserve its vital resources. This is conservation indeed. Hours of labor are shortened; labor is protected from machinery and the perils that beset certain callings, as mining; women and children are protected; sanitation and school hygiene become compulsory; breathing spaces for the city poor are provided; and particularly, and most hopefully, the marriage of the unfit is being prevented by the establishment of celibate industrial communities. Theoretically this intrenchment upon individualism by the authority of the state is fully justified by the finer type of individuals to come thereby.

4. How Mankind might progress.

Thus we have reviewed the main lines of human progress and the situation to-day. This is how mankind is getting on. But how might it get on? Suppose we applied ourselves to the study of the forces that make man, and then applied our knowledge? We have done this in our material world, and modern material civilization, only dreamed of in the Utopias of the Renaissance, is the result. If we did it in our vital world, who can reasonably doubt that the present dreams of the superman, the man with higher vitality, truer knowledge, finer sensibilities, stronger character, larger capacities in every way, would be the

reality of some centuries hence? Then our years would be known as another human Renaissance, this time not as the advancement of learning, but as the advancement of life, the age of education in man-making. An enlightened and well-disposed public opinion could accomplish marvels of progress in but a tick of the clock of the universe. What man has amounted to is but a token of what he may become. His evolution has already shifted from the material to the mental plane. Man is now beginning to take a conscious part in his own making. Conscious effort wonderfully abbreviates the slow processes of Nature.

The past predetermines the line of man's future evolution, though no prophet can predict what it will be. It may be the perfecting of present physical and mental powers; it may be the development of present incipient powers, such as telepathy; it may be in time the development of powers at present unimaginable. It would be a distinct aid to man if his mind by any means could make present the vast forgotten past or the distant reaches of space beyond telescopic vision, or could know the state of the dead. Avoidable ignorance is no cure for any human ill. These are admittedly dreams; of their content we are by no means so sure as of the methods of their realization. The road of progress we know, the goal we cannot see nor foresee. The road is the threefold way, the royal road of truth to the full realization of man's destiny, good births, good places, good wills. Eugenics enlarges capacity by mating the fit and preventing the mating of the unfit. Eutopias provide the good places of opportunity in which capacities may de-

velop. Eunoias are the rightly trained good wills that realize capacity by utilizing opportunity. May the traveller, man, and his threefold way become one with the errand to be done, — the making of a fitter race of men and women.

5. The Nature of Progress.

Having now indicated the progress man has made and the progress he might make, the question may be raised as to the absolute nature of progress. How is progress possible? Is it real or illusory? Does God progress? If so, how is He perfect? If not, how is progress genuine? These questions are easy to ask and hard to answer. Their consideration will help us later in finding the philosophy of man-making.

The Nature of Time.

The answers depend essentially upon the real nature of time. Nobody has doubted the reality of time except some theologians and some philosophers. Theology has separated between earthly time and heavenly eternity when time shall be no more. Yet theology, somewhat inconsistently, has pictured heaven as including events which presuppose time even there. Immanuel Kant among philosophers has attacked the reality of time as well as of space, holding that both time and space are peculiar to the human way of regarding events and objects, that they do not characterize reality, that they characterize only phenomena or reality as viewed by us. Time, and space too, are not derived by us from our experience of events and objects, they are brought by us to our experience of events and objects, they are *a priori* not *a posteriori;* they are the mental pre-conditions of experience, they are not products of experience; they are, in Kant's

phrase, "empirically real but transcendentally ideal," that is to say, they do belong to phenomena, but they do not belong to noumena.

Kant's Argument.

Kant's reason for holding this view of time and space was that they both, as we knew them, were characterized by universality and necessity; time covers all inner events and space includes all outer objects, and there are no exceptions to the necessary union of events in time and of objects in space. But universality and necessity do not characterize principles derived by observation from experience, all of which are both particular and contingent. Hence, Kant concluded, time and space were not derived from experience, but were contributed by the mind to experience.

It is a famous doctrine and we cannot go into all its relations; it is bound up with the whole of the very difficult Kantian philosophy. What shall we say to it? Is time unreal or real? If time is unreal, all progress is illusory; if time is real, progress is genuine.

Kant Criticised.

The trouble with Kant's view is the same as the trouble with all agnostics, — Kant was an intellectual agnostic; he knows too much about the realities he said nobody could know anything about. That time characterizes phenomena, we may all agree with Kant; that time does not characterize noumena, how does he know? That there are any unknowable noumena, how does he know? Like many philosophers, he is right in what he affirms and perhaps wrong in what he denies. As for the marks of a-priority, — universality and necessity, — these may be nothing more than

generalizations from exceptionless experience; all events we experience as temporal and as parts of one continuous time; all objects we experience as spatial and as contained in one space; such numberless experiences without any exceptions are enough to assure the mind that its concepts of time and space are universal and necessary without assuming that time and space are, in Kant's words, "the *a priori* forms of sense." Time, then, we conclude, is one of the objective elements we men experience; it is not contributed by our minds to experience. Without observers, if something happens, there is still time.

The Unity of Experience.

But further. The idea of unity has met us in several of our discussions, — the unity of man, the unity of Nature, the unity of deity. We now come upon the idea of the unity of all experience. Kant got into trouble when he asserted a peculiar human type of temporal and spatial experience, beyond which were realities, noumena, "things-in-themselves," neither temporal nor spatial in character. This introduced duality into his world. It is obvious that the things beyond experience must in some sense be experienced in order to be asserted. Thus all reality falls within one all-embracing experience. If all experience is one, and time characterizes what we men know as a part of this experience, it also in some sense characterizes the whole of experience. This need not mean that the whole of experience is in time, for, as Spinoza said, God may be infinite in an infinite number of ways; but it does mean that time is in the whole of experience, that time consequently is one of the real experiences of the Absolute, if we may introduce this

term for the whole of reality, and that consequently time is one of the realities. On the basis of the unity of all experience, the Kantian distinctions of kind between "empirical" and "transcendental" merge into distinctions of degree between less and more.

The Reality of Progress.

With the reality of time comes also the reality of progress. We may be deluded as to the amount of progress that has taken place, but the fact of progress itself is not illusory. The world moves, and with its movement, marking the lapse of time to us, human experience is becoming richer.

Does God Progress?

But the question arises again, how is God related to human progress? In the light of the foregoing discussion there is no content we can ascribe to the term "God" quite so worthy as the whole of experience, all reality, the Absolute. Time, we saw, is in God rather than God being in time. So progress is in the content of the stream of time within the Absolute Life; progress is in God, it is not necessary to say God progresses; as a flowing river may gather alluvia as it flows, becoming thereby richer, and finally depositing its riches at the delta, without the fertility of the country being thereby increased. Yet the river gathers from the land, and finally gives to the land. So progress is possible as man gathers from the Divine Life in which he lives, yet God as all-containing may suffer neither increase nor decrease. Man's progress is his increasing participation in the abundant life of God.

These deep matters, fascinating as they are, may yet repel us by their difficulty. But we live in the shallows of being so much of the time, it is well for

us occasionally to realize there are great depths, even if we can only sink in their mysteries. And these questions about progress help us to go further in our philosophy of man-making.

6. The Philosophy of the Man-Making Forces.

The race progresses, we saw, and may progress more rapidly, by means of heredity, environment, and will. What is to be our philosophy of these processes? These are evidently, in the light of the foregoing analysis, the divine means whereby men and women are made. Creation is rather the making of something out of something by growth than the making of something out of nothing by a word. Procreation, — transmitting heredity, environment, — shedding influence, and will, — combining the two effectively, — are the creative forces, are the means God uses to come into the life of man increasingly, are the means man may use to progress in God toward his ideal. God uses men to fulfil his purposes for man; the race is working out its own salvation, for it is God working in and through the race.

The Means of Creation.

Meaning of Heredity.

To consider the creative forces in succession. Heredity means the unity, the continuity, and the evolution of the living, especially human, species. It is the tie that binds together all living things. The cell is the unit of life; it has no known origin except preceding cells; it transmits its characteristics to all the cells that grow from it, it makes all living things one, all plants, all animals, and all men. Heredity is the linkage of cells, the bond of connection between the generations. Heredity passes on but not back, it moves only in the forward direction,

its series is irreversible, it tells the story of man, his origin, his nature, his goal. The stream of heredity running through all living and unfolding things realizes by slow degrees the meaning of man. In sum, the philosophical meaning of heredity is the unity of all mankind with itself and with all life.

Meaning of Environment.

Environment is the setting of the story of man. In the broadest sense of the term it includes all except the cell-life. One group of cells indeed may be environment to another, as the human body is a part of the environment of the germ cells, as one plant, animal, or person is part of the environment of another. Thus the environment itself is largely living. Perhaps if we knew the whole truth respecting the so-called inanimate environment, it too would be throbbing with life and significant with meaning, as Idealism holds with the poets. This environment is the condition of evolution, permitting nutrition, growth, change, development. Between heredity and environment, action and reaction take place, the struggle which is the condition of surviving. In sum, the philosophical meaning of environment is, existence includes an objective changing system in relation to which life must maintain itself by adjustment.

Meaning of Will.

Will is the response of the individual to his heredity and environment. It is the part consciousness plays in evolution. It is the individual organism helping to make itself, man taking a hand in his own making, piloting his own vessel of heredity through the sea of environment. And, greatest of all, it is the individual organism helping to make the future of the members of its kind, by improving

their physiological heredity, by transmitting the human social heredity, by providing a better environment, by fashioning their wills. Will means that at last conscious selection aids natural selection, that evolution comes to consciousness of itself, its past, its present, its possible grand goal. Will means that God, creating by means of evolution, finally fashions an incomplete creature, man, capable of purposeful coöperation in his own completing. The mechanical theories of evolution, using heredity and environment alone as the explanatory factors, do scant justice to the creature's struggle for survival, what Schopenhauer called "the will to live." This effort on the part of the organism to survive, whether in the case of the least amœba or the largest whale, is a pre-condition of life. The creatures that do not will to live do not live. Even the creatures that will to live end by dying, but they triumph over death through their will to live procreating offspring. Plato in the Symposium showed long ago, as Schopenhauer later, that the love of children is the love of immortality. Without the will to live no heredity could be transmitted, no environment sustain life. We are using will here to cover the broad sense of the term, viz., consciousness in action, and not simply its narrow sense of conscious choice. In sum, the philosophical meaning of will is that creatures take part in their own creating. This is peculiarly true in the case of the highest creature, man.

The Greatness of Man.

If we put these three elements together we get the idea of a process, occupying time, composed of an internal factor, — heredity; an external factor, — envi-

ronment; and a directive factor, — will, whose goal — the making of men and women — is being partially attained constantly, whose final goal — the perfecting of men and women — is ever more closely approached, but never reached. Using the Aristotelian distinctions among causes, we may say that the material cause of the process is environment, the efficient cause is heredity, the formal cause is will, and the final cause is man. There may be some question about the exactness of these identifications. In the light of this temporal process, apparently engrossing the interest of the evolving earth for countless past ages, we come both to understand and appreciate man. Some ancient words say: "When I consider thy heavens, the work of thy fingers, the moon and the stars, which thou hast ordained; what is man that thou art mindful of him? And the son of man that thou visitest him?" These are words of exaltation, not of abasement. Likewise, with Hamlet, those who know will say: "What a piece of work is man! How noble in reason! how infinite in faculties! in form and moving, how express and admirable! in action, how like an angel! in apprehension, how like a god! the beauty of the world! the paragon of animals!" Few of us will care to add with feigning Hamlet, unless we feign as he: "And yet, to me, what is this quintessence of dust? man delights not me; no, nor woman neither."

The Explanation of the Man-Making Process.

This one-way, irreversible, unfolding, time-filling process, with these means and this end, what shall we say in explanation of it? Is chance the father of it all? But chance is a name for human ignorance; it is

Chance? no true cause, it explains nothing. Is blind necessity, working in and through impersonal and mechanical Necessity? laws, the lord of all? But "necessity" is itself but a concept of the human mind, framed to aid the mind in its description of the regularity in the movements of the process; it is not the mind itself; nor could it, being blind, produce the seeing mind; necessity is the product, not the producer, of mind.

Conscious Will. Is it Conscious Will? Here only is an adequate explanation. It is Conscious Will expressing itself in time and space, bringing forth beings, like itself, as like as finite can be to infinite, to share its abounding life. It is Will, for in the process there is motion, action, conduct; it is Conscious, for we, its lesser products, are conscious, and no light springs from darkness; it is Conscious, for, as Anaxagoras said, only Mind can explain such order as we know; it is Conscious, for only so could we be so surely approaching our receding goal.

Maeterlinck quoted. In a notable though perhaps unduly agnostic passage in a remarkable book that combines science and philosophy, Maeterlinck writes: "Whoever brings careful attention to bear will scarcely deny, even though it be not evident, the presence in nature of a will that tends to raise a portion of matter to a subtler and perhaps better condition, and to penetrate its substance little by little with a mystery-laden fluid that we at first term life, then instinct, and finally intelligence; a will that, for an end we know not, organizes, strengthens, and facilitates the existence of all that is. There can be no certainty, and yet many instances invite us to believe that, were an

actual estimate possible, the quantity of matter that has raised itself from its beginnings would be found to be ever increasing. A fragile remark, I admit, but the only one we can make on the hidden force that leads us; and it stands for much in a world where confidence in life, until certitude to the contrary reach us, must remain the first of all our duties, at times even when life itself conveys no encouraging clearness to us."[1]

True Conception of the Universe.

The universe in which will works these wonders with matter is no vast machine grinding out little and big creatures, as even Mark Twain[2] appears, beneath his superficial laughter, really to have regarded it, but a Life, a purpose, a system of purposes in itself, expressing itself in many lesser lives. The view of the universe as a mechanism, made possible to modern minds through Newton's law of universal attraction, is a construction of man's own intelligence to satisfy his own purpose in understanding the universal motion. Behind man's intellect, formulating mechanical conceptions of life and Nature, is man's will to know and his feelings of appreciation. So, behind the apparently routine world that mechanism describes we may suppose there is meaning, life, feeling, and will, akin to ourselves, but vaster. All variety escapes our mechanical descriptions, all irregularity, all variation, but just as there is variety — evanescent feelings, fleeting ideas, momentary impulses, halting intentions

[1] Maeterlinck, "The Life of the Bee" (Tr. Sutro), N. Y., 1907. pp. 382–383.

[2] Cf. *Current Literature*, June, 1910, "Mark Twain's Pessimistic Philosophy."

— that escapes our mechanical psychology, so there is variety in Nature that escapes our mechanical descriptions: little motions of the air, wavelets of the sea, twinklings of the stars, songs of the birds, noddings of flowers, plays of animals, laughter of children. All is instinct with a common life. But when man can, if ever, perfectly describe in mechanical terms the life of Nature, even then he must know that Nature may be uniform because the will of God is consistently expressed in it. It is man's scientific duty to explain all mechanically; it is his moral duty to recognize personalities. At the end of the mechanical chapter the scientist must still allow that his love for his mother is really a relation of person to person and not of dust to dust. "Freedom is the truth of necessity," says Hegel. So mechanism is the efficient means used by intelligence in reaching final ends. Mechanism describes the behavior of Nature, teleology explains mechanism, man with intellect and will explains both mechanism and teleology, the Conscious Will of the world explains man and all.

The Conception of God.

This Conscious Will is our God, the true Father of our being. Our heredity is originally from Him, and represents His continuing process of creation by procreation. Our environment is He Himself expressed in Nature. Our will is, when right, His own will in us lifting us toward Himself, that we may be, that we may be ourselves, that we may be His, that human and divine comradeship and collaboration may exist upon the earth. Man's greatest intellectual mistake has been in separating between himself in his best moments and God; man's greatest need is to find the

unity between his being and God. To be in harmony with external and internal nature is to be in harmony with the immanent God. If these things be true, we may anticipate that one of the fruits, perhaps the finest, of the new education of the better race to come will be the cultivation of the spiritual sense, the sense of the divine meanings in the daily happenings, the vision of all things in God, the awareness that man's life is lived as a part of the permeating Universal Life. This is not impersonal pantheism, nor artificial dualism, nor degrading materialism, nor impotent parallelism, nor hesitant agnosticism, nor anthropomorphic theism, but real monotheism. It is the larger faith of our modern world with its new knowledge, that unabashed but reverently looks into the processes of Nature as they have been making life for ages past, as being really only the methods of the divine working hitherto, the faith that calls man to work, to work with the things of earth not as earthly but as heavenly, that the joint creation of God and man may be worthy to endure.

> "I read, on the porch of a palace bold,
> In a purple tablet letters cast:
> 'A house, though a million winters old,
> A house of earth comes down at last:
> Then quarry thy stones from the crystal All,
> And build the dome that shall not fall.'"

Tucker on our Educational Need.

But what have these views as to the ultimate things to do with education? They may become the light of all our educational seeing. Many watchmen agree that society is ready for a new ethical and religious awakening. Dr. W. J. Tucker finds "the

greatest present need in the educational world" to be "that of an ethical revival at the heart of education." What he means by this will appear from the following quotation:

"Where then shall we look for the recovery and advancement of education to its highest ethical power? Chiefly, I believe, to our capacity for carrying on the idealizing process through which we accustom ourselves to think reverently of all knowledge, to insist upon all intellectual work as a moral discipline, and to hold all intellectual attainments and achievements as tributary to the social good." [1]

Idealism in Educating.

Not every man, not every teacher, can idealize his work ethically, or at all. It is our great desideratum. It is by the use of idealism we are to make men and women who can idealize. With the perfecting of the spiritual sense along with the other noble physical, intellectual, emotional, moral, and social capacities of man, we may anticipate the day when the measure of a man will include the physique of the athlete, the reason of the scientist and philosopher, the feeling of the poet, the imagination of the prophet and inventor, and the will of the reformer. Such men will be practical idealists, with vision to see and with energy to execute. Some such fruition as this has already been glimpsed in the greatest characters of human history; those great ones are the earnest of the coming men and women God is making through present men and women. To aid in this work is the true calling of all noble souls. And to aim at this

[1] W. J. Tucker, "Modern Education Capable of Idealism," in *Public-Mindedness*, Concord, N. H., 1910.

fruition, the perfecting of humanity in the image of divinity, is *idealism in educating*.

These words contemplate particularly our teachers. Theirs to inform young people aright as to bettering the race by selected heredity, by improved environments, and by good wills; theirs to provide the right environment in the schools; theirs to cultivate their own souls as the most important influence upon their pupils; theirs to aid in building moral character; theirs to receive the wages of going on; theirs to recognize, appreciate, and apply, with all parents and citizens, the last of the first principles in the making of men and women, viz., *eugenics*, *eutopias*, *and eunoias are the chosen means of the Divine Purpose in perfecting mankind.*

The Last Principle of Man-Making.

Idealism as a practical philosophy of living, as well as educating, is expressed for us in Tennyson's "Higher Pantheism," a poem now fortunately too familiar to require quotation. But, as setting the philosophy of this book to song, I will append from the same poet:

THE HUMAN CRY

I

Hallowed be Thy name — Halleluiah! —
Infinite Ideality!
Immeasurable Reality!
Infinite Personality!
Hallowed be Thy name — Halleluiah!

II

We feel we are nothing — for all is Thou and in Thee;
We feel we are something — *that* also has come from Thee;
We know we are nothing — but Thou wilt help us to be.
Hallowed be Thy name, Halleluiah.

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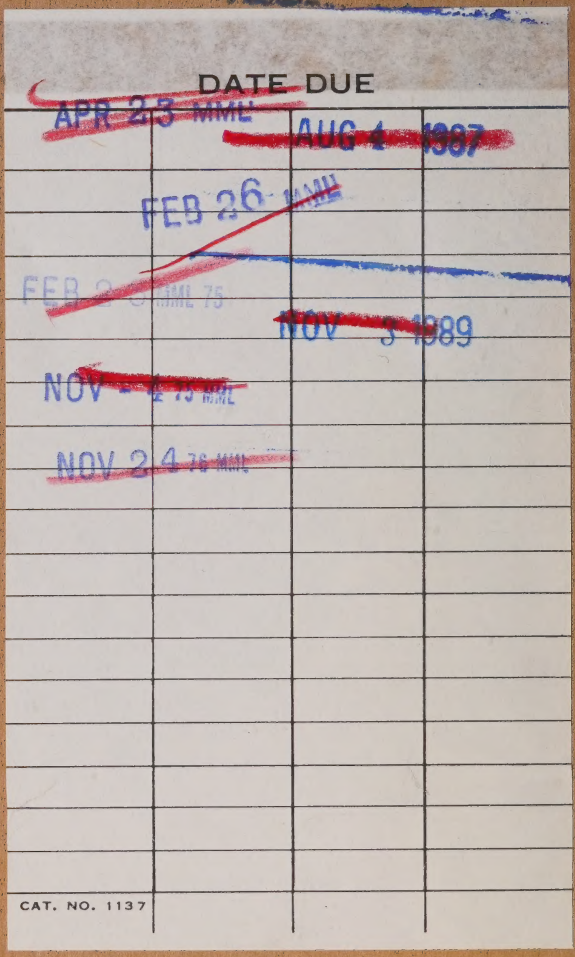
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